

# MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office.

VOL. LVIII. No. 15.  
WEEKLY.

BALTIMORE, OCTOBER 20, 1910

\$4.00 A YEAR.  
{ SINGLE COPIES, 15 CENTS.

## Manufacturers Record.

PUBLISHED EVERY THURSDAY BY THE  
MANUFACTURERS RECORD PUBLISHING CO.  
BALTIMORE.

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Subscription, - - - - - \$4 a year  
(payable in advance) to United States,  
Mexico, Cuba, Porto Rico, Hawaii and the  
Philippines.

To Foreign Countries (including Canada) in  
the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as sec-  
ond-class matter.]

BALTIMORE, OCTOBER 20, 1910.

### WELLMAN'S PARTY.

It required courage of a high order to make the trial, and failure did not come before another record in aviation had been made by Americans.

### TEXAS CITY EXPANSION.

A dispatch from Texas City to the MANUFACTURERS RECORD gives particulars regarding additional work to be undertaken in the furtherance of the development of the remarkable warehouse and terminal facilities already existing at that growing port. The new improvements, which will include another warehouse 750 feet long, now authorized, will cost \$250,000, and will be the beginning of expenditures to be made during the next twelve months for still further enlargements, aggregating \$1,000,000. The development work that has been done at Texas City has given to that place one of the most comprehensive warehouse and wharf plants existing in the country. What has been done there should be studied by every port in the South, for, if Southern ports are to attain to the fullness of their opportunities, they must carry out warehouse plans on a scale such as has been provided at Texas City, where fireproof warehouses equipped with the most modern facilities for handling goods, aggregating 5000 feet or more, have already been completed.

### SOUTHERN OATS.

To its wheat crop of 86,208,000 bushels the South adds this year 69,940,000 bushels of oats. Its wheat crop is an increase over that of 1909 of 42.4 per cent., while the crop in the rest of the

country decreased 10 per cent. The South's oat crop this year is 17,839,000 bushels greater than last year's, or 34.2 per cent increase, while the 27.1 per cent. increase in the rest of the country represents 271,204,000 bushels more than the crop of 1909. Comparison of 1909 and 1910 in bushels by separate States is made in the following table:

States.	1910.	1909.
Alabama.....	5,494,000	4,455,000
Arkansas.....	4,592,000	3,739,000
Florida.....	502,000	527,000
Georgia.....	6,243,000	6,650,000
Kentucky.....	4,259,000	3,858,000
Louisiana.....	781,000	640,000
Maryland.....	810,000	711,000
Mississippi.....	3,168,000	2,400,000
North Carolina.....	3,458,000	3,234,000
South Carolina.....	4,593,000	4,431,000
Tennessee.....	4,500,000	4,000,000
Texas.....	24,881,000	11,500,000
Virginia.....	4,268,000	3,800,000
West Virginia.....	2,394,000	2,156,000
Total.....	69,940,000	52,101,000
United States.....	1,036,396,000	1,007,353,000

### BUYING AND SELLING FARMS.

"Back to the farm" is but the echo of a sentiment which finds a voice in the heart of nearly every man. Though men may crowd to the cities because of the seemingly greater opportunities for the actual handling of money, whether they make more in the long run or not, the natural desire of mankind is to get back to the country. Men are coming to realize that in country life is to be found many advantages which cannot be had in the city, and the successful business man is more and more turning his thoughts to the ownership of a farm as an investment or as a place in which to spend a part of his life, or as a permanent home while continuing business in the city. With this tendency seen everywhere there is at the same time a growing tendency on the part of Northern and Western people to buy Southern farms. Those who are looking for such opportunities, either because of the safety of the investment or because of a desire to escape the rigors of Northern winters, will find in the Classified Opportunities Department of the MANUFACTURERS RECORD many attractive farm propositions. Lands in Florida and the Carolinas, lands in Alabama and Louisiana, in Georgia, in Texas, in Virginia and elsewhere are offered for sale through that department. But it is not simply farm lands that are thus advertised, for the owners or agents of mineral and timber lands, water-powers, etc., likewise naturally seek buyers through it.

If you do not make a regular study of the Classified Opportunities Department, presenting as it does opportunities for the seller, whether he be a man selling his time, or his experience, or properties; or the buyer, whether he be a man looking for the purchase of property, advice, or salesmen, or industrial plants, water-powers or lands, here is the common ground on which all can meet. It is not only a buyers' guide, but a sellers' guide. Every man will find in it something of interest, something that may prove of value to him, even though he may not be hunting for any particular thing. Here are to be found opportunities for employment,

opportunities for the development of new enterprises, for the investment of money, some of which must of necessity prove of interest to every man who likes to keep in touch with what the world is doing.

### WHAT LOW-PRICED COTTON MEANT.

Of far wider application than to the industry under discussion were the words of a great English ironmaster at last week's meeting of the American Iron and Steel Institute, when he said:

We talk about the time of \$17 rails, and you may do so if you like, but what does it mean? It means this: That when that policy of \$17 rails was inaugurated it meant more misery than was caused by the bloodiest battle in war. It meant ruin in thousands of homes. It meant an industrial army laid aside and the workers deprived of their sustenance. It meant loss of industry that ought to have been maintained. It meant disaster worse than war. It was war in commerce.

Paraphrasing this thought, what does six-cent or eight-cent cotton mean? That question ought to appeal strongly to the English mind, for, ever since the era of six-cent or eight-cent cotton passed, England has been the center of efforts to bring about a return to such a situation. What did six-cent or eight-cent cotton mean?

In the ten years between 1891 and 1901 the highest average price per pound for middling uplands in New York in any one year was 9.03 cents, in 1891, and the lowest was six cents, in 1899. In that decade the average price of cotton ranged lower than in any previous ten years in history. What was the result? In the decade between 1880 and 1890 the assessed value of property in the South increased from \$2,934,522,065 to \$4,588,928,686, or by \$1,654,406,621, equal to more than 56 per cent. In the next decade, that of low-priced cotton, the increase in assessed value was only to \$5,266,594,044, or by \$677,665,358, something more than 14 per cent. At the turn of the century cotton began to return to its proper place, and has now reached a price yielding a reasonable return to the growers above expenses. Since 1900 the assessed value of property in the South has nearly doubled, the increase in nine years—from 1900 to 1909—nearly equaling the actual assessed value of 1890, and being more than double the increase between 1880 and 1890. The increase in the nine years was \$4,293,405,956, or at the rate of 81 per cent. Six Southern States show in 1910 an increase in assessed value of \$212,000,000 over 1909, indicating that the total for the South this year will approach \$10,000,000,000.

The difference between an increase of only 14 per cent. in assessed values of property and 81 per cent. is the brief answer to the question, What did low-priced cotton mean? It meant poverty and misery in many thousands of homes; it meant an army of workers moving along on half-filled stomachs; it meant a crippling of trade through hundreds of ramifications; it meant all

the difference between \$282,772,974 for a crop of 7,452,116 bales in 1898-99 and \$672,285,093 for a crop of 7,569,315 bales in 1907-8 and \$778,894,095 for a crop of 10,009,608 bales in 1909-10. The difference of nearly \$400,000,000 received in 1907-08 above the price received for about the same sized crop in 1898-99 is a mark of the increased ability of Southern cotton-growers to provide themselves with the necessities and comforts of life, and the explanation of the prosperity that has come to the South in the past ten years, which has been an effective influence for the prosperity of the whole world. To push down the price of cotton to six cents or to eight cents would mean to the South in ten years a financial disaster approaching that wrought by the five years of war in the sixties.

We may well rejoice that this is now impossible. The logic of the situation suggests an even higher range of prices than we have had for the last twelve months. The juggernaut of cheapness, which the English speaker from whom we have quoted denounced as a curse wrecking thousands of homes, might well be regarded with horror in the South not only by cotton producers, but by every man, woman and child in that section. Cheap cotton means cheap men; it means poverty and ruin. A full price for cotton means the uplifting of the whole agricultural community; it means progress and prosperity everywhere throughout the South.

### MORE RAILROADS ARE NEEDED.

Considering the amount of new railroad which the South needs there is remarkably little railroad construction under way in this section at present. The work in progress may be briefly summed up. It includes principally the Western Maryland extension from Cumberland to Connellsville, the building of the Winston-Salem South Bound in North Carolina, the Florida East Coast extension and the building of the Santa Fe connecting line between Coleman and Lubbock, Tex. That is practically all the work of magnitude now going on in this part of our country.

There is some smaller work, such as the building of an extension of the Pensacola, Alabama & Tennessee Railroad to Mobile; the making of extensions from time to time to the Tombigbee Valley and the Alabama, Tennessee & Northern railroads in the western part of Alabama, which are expected to finally provide a through line from Birmingham to the Gulf; the building of the Wasioto & Black Mountain Railroad; a Louisville & Nashville enterprise in Harlan county, Kentucky; the extension of the Lexington & Eastern Railway; another Louisville & Nashville road, which has just let contract for 80 miles of new track; the building of the Illinois Traction Co.'s line into St. Louis; the St. Louis & Kansas City Electric Railway; the Memphis, Dallas & Gulf enterprise in Arkansas, and the Southern Pacific cutoff in Louisiana to

connect Baton Rouge and Lafayette, which is now being finished up. This comprises most of the construction actually proceeding.

But there are important pieces of work which are halting. One of these is the Clinchfield road's contemplated extensions north to Elkhorn City and south to Charleston, respectively. Another is the extension of the Buckhannon & Northern northward in West Virginia and Pennsylvania to connect at Brownsville in the latter State with the Pittsburg & Lake Erie road; also the completion of the Savannah, Augusta & Northern that is designed to connect Savannah and Chattanooga. Then there is the proposed extension of the Cincinnati, Hamilton & Dayton to open up new coal fields in Eastern Kentucky; the Chesapeake & Ohio projected extension into Ohio for a short coal route in connection with the Big Sandy division, and the contemplated extension of the New Orleans, Mobile & Chicago Railroad to New Orleans. The Harriman & Eastern, a new railroad company, is also about to let contract to begin a line which is to run from Harriman, Tenn., through that State and North Carolina to some point on the Atlantic.

In addition to the foregoing, there are many suggested extensions of existing lines, as well as numerous new railroad companies having in view enterprises of greater or less dimensions, yet little or nothing is being done, although it is apparent that the opportunities now offering should be seized if their advantages are to be gathered in the near future. For, notwithstanding talk about business depression here and there, and uncertainty as to the effect of political agitation upon commerce and industry, the fact remains that the railroad annual reports now being published display, with scarcely an exception, excellent gains over preceding years, some of the increases being not only very good, but highly encouraging. Not only is that true, but the three months of the fiscal year elapsed between July 1 and October 1 continue to show gains over last year.

Does not this altogether mean that now is the time to build?

#### NO ROOM FOR MENDICANCY IN A GREAT SOUTH.

The Gadsden *Times-News* is rather overoptimistic when it says:

Rockefeller's hookworm gift and Carnegie's libraries touch here and there, but the South, the Great South, knows nothing of them, and cares less. The attitude of most people is that if the rich men of the nation, whether of the North or the South, want to fritter away their ill-gotten gains on fads, whether it be worms or books, they should be allowed to do so.

Is the *Times-News* unaware of the large number of State and denominational institutions of education in the South which have already become beneficiaries of the Rockefeller \$53,000,000 Educational Board or of the Carnegie Foundation for the Advancement of Learning, known as the Carnegie Pension Fund, or which are straining every energy to become involved in the wholesale beggary encouraged by the allied "benefactions?" From these institutions are going forth the young men who are to become the preachers, the lawyers, the professors and the other educational influences of the Great South. Their colleges, in begging for money at every opportunity, are training them to the mendicant mind, and consequently they may be expected to promote the spirit of mendicancy until the ripples of

its waves touch the most obscure out-of-the-way places in the South. The South is great today because it learned in sore affliction to depend upon its own exertions, to be self-reliant and self-respecting. At the moment when the need for alms was passing, along came proffers of aid from influences that had not previously showed the slightest interest in the South. The number of educational beggars that suddenly rose to the bait was amazing. To be sure, they represented neither the greatness of the old South nor the greatness of the South today. But unless this spirit of mendicancy be rebuked and suppressed, the real greatness of the South will never be fulfilled.

#### LAND RECLAMATION AS AN ADVERTISEMENT OF THE SOUTH.

Mr. Thos. H. Means of Symmes & Means, agricultural engineers of San Francisco, in a letter to the MANUFACTURERS RECORD referring to the purchase of a tract of land in Louisiana for reclamation, says:

I see that you have persistently advocated the reclamation of marsh land in Louisiana, and I think you are certainly right in doing so. In all of my experience covering nearly every State in the Union, I have never seen opportunities so favorable for reclamation work as now exist in Southern Louisiana.

The MANUFACTURERS RECORD has advocated the reclamation of the 50,000,000 acres of wet land in the South because it has recognized it as one of the big things to be accomplished by the South, and that the act of accomplishing will be one of the greatest means of attracting desirable attention to Southern agricultural opportunities. Our judgment in that particular has been reinforced by the details of the movement in population made known in the census of Missouri. The full returns for the State may not be satisfactory to men who know of the great potentialities of Missouri, but of greatest significance is the point made by the *St. Louis Republic* in analyzing the population figures for the several counties. It says:

A striking exemplification of the contention that advertising pays is found in the census returns from Southeast Missouri counties. Practically without exception the counties in the Little River drainage district, in which millions are now being expended for the reclamation of swamp lands, show material increases. The work being done in these counties, the land of which, when rescued from the waters that have overflowed them for years, is equal to the Valley of the Nile, has been exploited by the enterprising men of that section, and almost as fast as an acre is opened to cultivation it has found a thrifty occupant.

The importance of these facts is emphasized by Mr. B. F. Yoakum, chairman of the Frisco System, and active in the campaign for reclamation, as follows:

The most striking feature in the reports published this morning is the splendid results secured by the drainage of swamp lands. For instance, in New Madison county there is an increase of 72 per cent., 8208 persons, all on account of reclaimed swamp lands. Scott county has an increase of 9280, or 71 per cent., for the same reason. Drainage of swamp lands gave Pemiscot county an increase of 61 per cent., or 7444 persons. These are only three counties in the southeastern drainage district. Only about 40 per cent. of the swamp lands of this district have been drained so far. This work has only been going on in an aggressive way for about five years, and naturally the results are not proportionately as great, both as to population and wealth, as when the settlements are older. This is only a corner of one State. In the Mississippi Valley there are 25,000,000 acres waiting reclamation by drainage. The soil which may be made available by this reclamation is very rich, and all of the lands thus saved would sustain a

population larger than many of the older States. The valley is very fortunate in having this submerged land for future farm homes, as many of the States have no vacant lands to develop.

It is estimated that in the lower Mississippi Valley alone are 30,000 square miles of reclaimable land capable of producing a crop of cotton equal to the total crop now raised annually in the whole South. Experts from the Middle West have recently expatiated upon the wonderful corn-growing potentialities of reclaimed lands in Louisiana, and the drainage of the Everglades in Florida and of elevated wet lands in Georgia, the Carolinas and Virginia is the promise of vast additions to the special agricultural possibilities in those States. This reclamation work may be expected to attract to sections of the South thus favored many men already engaged in farming in the South. To be of greatest benefit it should attract millions of farmers from other parts of the country and from foreign lands, not only to the reclaimed lands, but to lands capable of yielding under scientific culture far greater results than at present.

#### APPLE SHOW FOR ATLANTA.

A bull's-eye shot of suggestion is made by the *Atlanta Constitution* to the effect that the National Apple Show be brought next year to Atlanta. This year it will be held at Spokane, Wash., and the entire exhibit will subsequently be placed for a week at Chicago. It will be recalled that Southern apple growers have taken prizes for their exhibits at this show, and in that way have called attention to the wonderful possibilities of the South in apple growing. But could the annual show be held at Atlanta and advantage taken to display there the apples of Arkansas, Georgia, North Carolina, Virginia, West Virginia, Maryland and other Southern States, not only would the South itself be amazed at its own potentialities in this particular, but the whole country would be interested in learning of them. In spite of the widespread information that the cotton crop averages only between 30 and 40 per cent. of the annual value of Southern farm production, the great importance of cotton in the commerce and the industry of the world is largely responsible for the fact that thought of Southern agriculture very frequently falls to give weight to the grain crops aggregating 900,000,000 bushels annually, the \$180,000,000 worth of live-stock products, the \$345,000,000 of poultry and dairy products, the \$150,000,000 of fruits and vegetables, the \$75,000,000 of tobacco, and the \$50,000,000 of sugar products. Among the fruits, apples are becoming of greater and greater value, and the selection of Atlanta as the place for the next national apple show would not only give a tremendous impetus to apple growing, but also fasten the eyes of the country upon the promise of the South in general agriculture.

#### RAILROADS IN WORKS FOR THE SOUTH.

Mr. H. F. Smith, vice-president of the Nashville, Chattanooga & St. Louis Railway, in a letter to the MANUFACTURERS RECORD regarding the work of that road in its plan of campaign for encouraging immigration and for helping the settlers after they have been brought to the South, which he says is indicative of what the leading railroads of the South generally are doing, writes:

This company's freight and passenger agents, particularly those whose territory

embraces the section served by our rails, are engaged in stimulating the interest of the miner, manufacturer and agriculturist in our section of the South. Immigration into our territory is encouraged. We maintain resident agents in substantially all counties along our lines. Monthly conferences are held with those agents and suggestions advanced and acted upon looking to the best way of reachings and interesting prospective settlers. Our Industrial and Immigration Department is actively engaged, with the aid of State and Federal authorities, in organizing State and county live-stock associations and in conducting a series of sales of high-grade stock at various points throughout our territory. Through these sales an improved breed of stock is placed within the reach of the farmers at a minimum cost.

We have hundreds of correspondents throughout the East, North and Northwest who co-operate with our Industrial and Immigration organization and its resident and traveling agents in placing the advantages of our section of the South before the desired class of prospective emigrants throughout the Northern territory and some sections of Canada. In certain Northern, Western and Eastern periodicals we maintain advertisements calling attention to the advantages of our section, and compile, publish and distribute much data of interest to prospective immigrants.

A family once settled in our section is looked after by salaried agents and its interests fostered until we find said family established and well satisfied with its new home and environments, and I beg to submit what this company is doing along this line is not materially different or materially more, comparatively, than is being accomplished by substantially all other prominent Southern railroads.

Mr. Smith thinks that substantially all other prominent Southern railroads are doing the same work. We think he is partly mistaken. Some of them are doing it, and doing it well, but there are some Southern roads which apparently have no system whatever of compiling information or of intelligently seeking to attract settlers. A prominent official of one of the leading railroads of the South, having several thousand miles in operation, recently stated to a representative of the MANUFACTURERS RECORD that while the managers desired to attract farmers to the country tributary to their line, they had no interest in seeking to develop manufacturing or to draw manufacturers from other sections to their territory. He said that the country tributary to his line had no particular advantages to offer to manufacturers, that it did not run through a manufacturing country, and that, therefore, its managers were in no wise interested in reaching manufacturers to draw their attention to this territory. And yet that road runs through many of the most flourishing cities and towns of the South where manufacturing is gradually increasing, where there are many opportunities for profitable manufacturing, and where the people in these towns and cities are tremendously interested in the development of manufacturing; but the statement made was from official sources and reiterated on several occasions. Therefore, there is at least one exception to Mr. Smith's generalization.

We wish it were true that every railroad in the South was doing what Mr. Smith reports his road is doing, and that for every dollar it is now expending in this work it was expending at least ten dollars, for the profit to the road and to the country would be increased more than tenfold. To the roads that are doing this good work in the South is due all possible credit, and yet while giving full credit it must be said that when measured by what the roads of Colorado and the Pacific Coast are doing, the work of Southern roads show that they have not yet fully utilized their opportunity. It may not



be the fault of the managers of Southern roads; probably it is not; but it is certainly the fault of the controlling owners of these roads that they do not compel a very much broader campaign, and that they do not provide ten dollars for every dollar that they are now expending. In some cases the industrial and immigration departments are achieving great things in proportion to the money available for their work, but they ought to have a far more liberal appropriation in order to broaden their campaign and do the things needed to bring the largest results.

#### NEW YORK NERVE.

New York bankers have often taken a position of too much "cocksureness" in many of the things that they have undertaken to do in financial and business affairs. Accustomed to doing big things, they have grown accustomed to wanting to do things their way, and sometimes this disposition has carried them a little too far. Commenting on the efforts that are being made by English bankers to force some guarantee from American bankers on cotton bills of lading, the *New York Journal of Commerce* says:

Bankers here say they are ignoring the protests of Southern cotton men against the formation of a guarantee company, which is to guarantee the validity of railroad documents covering exports of cotton. If the details can be worked out in a manner satisfactory to the bankers, cotton shippers, it is said, will be formed to secure guarantees in order to get a purchaser for their bills, whether they approve of the plan or not. Some of the members are of the opinion that it was a mistake to canvass Southern Cotton Exchanges for their views on the proposition.

It is to be hoped that the *Journal of Commerce*, reliable as it usually is, may in this case be in error. It will be a rather high-handed position for New York bankers to take to persist in their purpose to run the whole affair and to compel cotton shippers to accept their terms. The English bankers tried to bulldoze American bankers into accepting their terms, but failed. From the beginning of the controversy the MANUFACTURERS RECORD has taken the ground that primarily this is a matter between English buyers of cotton and English bankers. The spinners of Europe are compelled to have American cotton. They must buy it on our terms if we simply, as holders and owners of the raw material, lay down our terms and stick to them. Then the English spinners will very quickly bring the English bankers to terms, because a cotton famine in England would paralyze the whole industrial and financial life of that country. No one realizes this better than the English bankers. If, however, they can force American bankers to come to their terms, and if American bankers in turn can compel cotton shippers to do their bidding, then the ultimate loss will fall upon the South, and not upon the buyer.

If the statements made by the *Journal of Commerce* are correct, it behooves the cotton men of the leading exporting cities of the South to make some concerted effort to break away from the control of the situation by New York, and to become independent of the financial power of that city over the cotton export business.

#### THIRTY YEARS' PROGRESS.

In quiet celebration of its completion of 30 years of work in Buffalo, the *Evening News* of that city calls attention to the fact that in that time its circulation has increased from 7000 to 100,000. This is one of the evidences of the growth of Buffalo, in which the *Evening News* has been

an important factor and a striking token of the appreciation in which the newspaper is held by the citizens.

#### HOW ONE MAY DIE POOR.

The discussion going the round of the daily papers as to whether the report that Andrew Carnegie or John D. Rockefeller propose to establish an endowed newspaper is true or not suggests that they might study the old story about the contract made between the Devil and a man who was anxious to have an ample supply of money for all his needs.

In order to secure the money desired he made a contract to sell his soul to the Devil, with the stipulation that he was to be supplied with unlimited money for any will extravagance or any purpose of any kind for which he desired to use it. He and the Devil were to meet occasionally, and at such meetings he was to report the amount expended and get a new supply for future extravagances. Having made the contract, the Devil supplied him with money in abundance, which he endeavored to the best of his ability to spend. He indulged in yachts and fast horses and high living and the owning of many homes in different lands, but still he could not get rid of all the money that the Devil willingly furnished in return for the bargain of his soul. At last, however, it entered into his head to publish a newspaper. He undertook the establishment of such an enterprise, and into this he poured the money which the Devil had furnished him so freely, satisfied that there was no limit to the amount of money that could be furnished. But in less than a year the Devil sought a conference and told him that while he had been able in fulfilling the contract for the purchase of his soul to furnish the almost unlimited amount of money that he had been spending, he would be compelled to cancel the contract and let him take back his soul, as he could not provide money enough to run a newspaper, and he would rather cancel the contract and give back the man's soul than undertake the job.

#### INLAND WATERWAYS LEAGUE.

The annual convention at Beaumont, Tex., this week of the Inland Waterways League is expected to attract 600 delegates, principally from Louisiana and Texas, to be presided over by Mr. John M. Conley. Of special interest in this connection is the fact of the completion last week of the link in the waterway between the Vermilion and Mermentau rivers, in Southwest Louisiana. When the waterway is completed there will be a safe inland route for vessels from New Orleans, on the Mississippi, to Brownsville, on the Rio Grande, tapping all the important rivers of Louisiana and Texas and ultimately becoming a part of the great system of intercoastal waterways extending along the Gulf and Atlantic coasts from Mexico to New England.

#### THE COTTON MOVEMENT.

In his report for October 14 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 44 days of the present season was 2,148,482 bales, a decrease under the same period last year of 347,808 bales. The exports were 1,122,726 bales, a decrease of 56,160 bales. The takings were, by Northern spinners, 215,972 bales, an increase of 37,219 bales; by Southern spinners, 253,876 bales, a decrease of 43,435 bales.

In an exposition of the industrial equipment of its city, the *Evening Herald* of Fall River, Mass., points to 104 cotton mills built of brick and granite, containing 4,000,000 spindles, employing 37,000 operatives and weaving 2000 miles of cotton cloth a day.

## AMERICAN IRON and STEEL INSTITUTE'S KEYNOTE

[Written for the Manufacturers Record.]

"It will hasten the day of the coming of the Kingdom of the Prince of Peace," were the closing words of an address made by one of the members at the annual meeting of the American Iron and Steel Institute as he commended a paper which had just been read. The whole day's discussion was pitched on this plane, and in this respect was probably the most remarkable meeting of any great industrial organization ever held in this country.

It is to be regretted that every word uttered at this the first annual meeting of the Institute and at the banquet in the evening could not have been heard or read by every man in America, for then this would have been recognized as a meeting of world-wide importance, epoch-making not alone in its influence upon the iron and steel industry of the world, but upon all other business interests. The papers read and the speeches made dealt not with the matter of how to make money, but with questions pertaining to the brotherhood of man, and especially to the betterment of labor and the conditions under which laborers work. Probably no other great business gathering ever held was so centered on the discussion of ethics in business and of welfare work for laborers as voiced in the sentiment of two or three speakers, who stated that the Golden Rule is still the standard for guidance in business as well as in all other affairs. Running through the whole discussion, the set addresses and the impromptu speeches alike, was the thought of co-operation and friendship in business and the responsibility of employers to protect and safeguard the interests of the employees. Nobody discussed how to make more money, but everybody who spoke talked of how to do business on a basis of mutual welfare and friendship.

At the banquet in the evening a distinguished English ironmaster in a very able address, in which he touched on these matters and in which he voiced the general sentiment expressed in the meeting, said:

"There is a great change in our relative position as nations. When I was here before it was the year of the Chicago Exposition. There were no motor cars, and many great advances were unheard of. In those days the one idea was for a man to go into our industry with a view to acquiring individual wealth. A revolution in that respect is coming, if, in fact, it has not already arrived. I do not know how you each regard yourselves, but speaking for myself—and I am connected with an amalgamation of concerns, though they are small as compared with some of your great corporations—I regard myself as a trustee for the workers, whether in the mine, the furnace, the mill or the railway, whatever their position may be, and for every woman, perhaps the widow of a workman, and every child, and for every person who has put his or her savings into the industry with which I am connected. I feel, we feel, that we are trustees for these people, and that we are not there solely to make our individual pile. I take it that the object of this new era of which Judge Gary has been laying out the program today is to go forward and to see if an agreement and mutual understanding, not of the law and of contracts, but of that brotherly, friendly feeling and co-operation which enables us to do so much if we abandon the cut-throat policy—the piracy policy, I may say—of killing our neighbors in order to aggrandize ourselves. We all desire to live and let live. That is the policy which I understand you are doing something to promote. I believe our gatherings together will stop the destruction caused by the juggernaut of cheapness, which strikes at

the happiness of thousands of our fellows."

As indicating how strongly these statements were approved, the speaker was often interrupted by hearty applause.

Strong as this is, it was preceded by equally striking statements by leaders in the Institute. Men talked of the ethical relation which should exist between rival manufacturers as well as between employers and employees; of the peace which should exist between competitors, rather than the cut-throat policy which prevailed in former times; of competitors in friendly rivalry as versus rivals in the life and death struggle, and of the peace among nations which should be made certain by the power of the peace among business interests. "There are no foreign countries," said one prominent banker identified with the iron and steel interests, "for industrial pursuits and modern methods have annihilated time and distance, and all the nations of the earth are being united for the common welfare of all."

Of the cut-throat policy which brings ruin to many the English speaker just quoted, giving as illustration the bitter competition some years ago when steel rails were sold at the lowest price on record, said:

"We talk about the time of \$17 rails, and you may do so if you like, but what does it mean? It means this: That when that policy of \$17 rails was inaugurated it meant more misery than was caused by the bloodiest battle in war; it meant ruin in thousands of homes; it meant an industrial army laid aside and the workers deprived of their sustenance; it meant loss of industry that ought to have been maintained; it meant disasters worse than war; it was war in commerce."

This condition was referred to as the juggernaut of cheapness which drags its destruction over the homes of thousands. One speaker said that the great writers and thinkers of the day are pointing to the change for better in business ethics, and added that in commercial dealings between men the Golden Rule is no longer ignored, but is being actually followed.

As these speeches were made in executive session with the understanding that they should not be given to the press, men talked freely, and not for effect on the public. If, however, the decision could have been reached before the close of the meeting to give to the daily papers of the country the speeches in full, or the stenographic report of the proceedings, it would have been found that the facts presented and the arguments advanced were of such vast importance as to have justified the widest possible attention by the Associated Press and the daily papers. A full report of the entire proceedings, if it could have been given to the country immediately, would have called forth more commendation from press and pulpit than was probably ever given to any business gathering held in this or any other country, and the American Iron and Steel Institute would immediately have received unbounded credit for taking an advanced position through the papers and discussions as to the betterment of labor, the policy of "live and let live" in business, or, as has been stated before, in behalf of friendly competition and co-operation rather than bitter cut-throat rivalry. The members of the Institute are projecting a program for the iron and steel trade of the world, which, if carried into effect, will practically compel all other interests to follow. They are taking the ground that the day has passed when men can act with the thought of "every man for himself, and the devil take the hindmost." Whether it

be possible to carry out all of the competitive business activities of these great interests on this basis or not, it is quite certain that the members of the Institute have set this ideal before them. Men are always molded by their ideals. If they be high, men will steadily grow toward them. Certainly the ideals set before the members of this Institute are worthy of world-wide endorsement.

It may be worth while to refer to the origin of the American Iron and Steel Institute. When the panic of 1907 struck the country with such terrific force Judge Gary, chairman of the United States Steel Corporation, invited the independent iron and steel people of the country to meet him at a conference and dinner in New York. At that time iron and steel men as a whole were probably more antagonistic in their feelings to each other, although there were good friends here and there, than the members of any other industry in the country. Judge Gary undertook to bring the whole trade into close personal touch, to the broadening of acquaintanceship into personal friendly relations, and into a full acceptance of his thought that they must all prosper alike or suffer alike. He urged that destructive war in trade should cease. At first many of the independent people were more or less skeptical. They did not quite understand Judge Gary's plan, and at later dinners freely confessed that though they had attended the first meetings with a view to scoff, they had been converted. This change in sentiment was very beautifully expressed at one of the dinners given more than a year ago, by Mr. E. A. S. Clarke, president of the Lackawanna Steel & Iron Co. At the dinner the tables had been splendidly decorated with flowers. Standing in high vases, they obstructed the views of those at the tables, so that it was difficult to see across from one table to another. In an impromptu speech, when called upon at the close of the dinner, Mr. Clarke said:

"When the flowers were removed a few moments ago I felt that we had been deprived of a great pleasure. Their beauty had delighted our eyes. We had feasted upon them while feasting upon the viands placed before us. Yet as they were taken away there came to me another thought: They had obstructed our view, so that we could not see each other so clearly, face to face. Then I thought of the time when, one year ago, the flowers of prosperity bloomed so abundantly in the iron and steel interests that they obstructed our view, and we were unable to see each other, and know each other, except as active business rivals. When the flowers of prosperity were removed we came then, just as at this moment, to see each other face to face, and eye to eye, and the bond of sympathy and co-operation which has been developed is probably worth the cost. We have learned lessons in the last few months that we could never have learned without this personal contact which has come about through these gatherings in this period of depression."

That illustration told the story of what up to that time had been accomplished through Judge Gary's work. At a subsequent dinner it was proposed that those present should form themselves into the American Iron and Steel Institute, with a view to continuing the pleasant personal friendships that had been made, and likewise in order to make the Institute an organization for the discussion of the commercial side of the iron and steel trade rather than the purely technical side. The meeting on Friday last was the first annual meeting and dinner of the Institute, when it might be said to have been formally launched upon its career. To this meeting a large number of the foremost iron and steel manufacturers of Europe

had been invited, and some 30 or 40 of the most distinguished metallurgists of Great Britain and the Continent were in attendance. Nearly every great iron and steel-producing industry in the country was represented. In fact, in view of the large number of foreign ironmasters in attendance, it might be said that the world's iron and steel trade was here brought together as never before. The wealth or invested capital represented would probably aggregate three or four billion dollars. A list of those who attended the banquet is given on the following page, with a reproduction of a flashlight photograph of the banquet-room.

The meeting of the Institute was held at the Waldorf-Astoria, the opening session being at 10.30 Friday morning. After the address of the president, Mr. Elbert H. Gary, chairman of the United States Steel Corporation, which is published in full in this issue, a paper on "Foreign Relations," by Mr. James A. Farrell, was read, followed by a discussion on the subject by one or two members, as well as by one of the foreign guests.

Mr. Wm. B. Dickson, vice-president of the Steel Corporation, read a paper on "Betterment of Labor Conditions in the Steel Industry." This paper attracted very much attention, and when published it is certain to command the widest discussion throughout the country. Mr. Dickson took very advanced ground in regard to what must be done by manufacturers in looking to the betterment of the condition of their employees. Every employer of labor in the country will be interested in a study of this paper, and many who are not familiar with the great work which the Steel Corporation is doing for the improvement of conditions under which its employees work will be greatly surprised at the facts given.

Following Mr. Dickson's paper Mr. Willis L. King, vice-president of the Jones & Laughlin Company, presented a paper on "Contract Obligations," dealing with the perplexing questions which constantly arise in the iron and steel trade between sellers and buyers as to the cancelling of contracts. This called forth an interesting discussion, in which it was pointed out that sometimes the sellers are at fault as well as the buyers, but that the situation demanded the careful working out of some plan by which consumers and producers in the iron and steel trade can arrange a more satisfactory working basis than the present system.

Mr. Charles Kirchoff presented a paper on the "International Metallurgical Congress of Dusseldorf," which attracted much attention and brought forth some interesting discussion.

In the evening a banquet was given, attended by over 200 members and guests, at which many exceedingly interesting addresses were made by the foreign visitors. Those from Germany, France and other continental countries spoke in English, with an exactness and fluency rivaling the best American speakers. At the close of the banquet there was a splendid exhibition by moving pictures of the marvelous work which has created the town of Gary, Ind. The first picture showed the barren sand dune, wind-swept spot in 1906, on which now stands the town of Gary. From that point rapidly on to the heavy grading work, the construction of a harbor and great shipping facilities for accommodating 10,000-ton steamers and unloading iron ore, the building of the furnace plant, the vast rail mill, then on to the loading of the rails by magnet cranes and the shipment by rail, the pictures told the story more graphically than words could tell of what had been accomplished.

While the members of the Institute passed no resolutions and took no action

upon the various papers read and the speeches made, and while there may be difference of opinion among them as to the feasibility of carrying out some of the suggestions made as to the betterment of labor conditions, the general sentiment, as far as it was voiced in public, was strong in its commendation of all that was said. The whole spirit of the meeting in the discussion of questions between manufacturers as affecting trade and in considering the improvement of labor was aptly voiced in the sentence quoted from one of the speeches at the beginning of this letter, to the effect that the work of the day meant the hastening of the coming of the Kingdom of the Prince of Peace. Such a meeting is necessarily epoch-making in its influence upon the world's iron and steel trade, and from that to all other business interests.

On Saturday the members of the Institute, with their foreign guests, made a trip around New York harbor, and on the even-

ing of October 16 left New York on a special train for Buffalo, Chicago, Pittsburgh and Washington.

This full week of sightseeing will give to the foreign guests the opportunity of investigating the great iron and steel-making centers of the country. It was not possible to arrange that the trip should this year include the South, but it is to be hoped that next year the Iron and Steel Institute and such foreign guests as it may have will make a special excursion through the coal and iron regions of the South.

The committee of arrangements, composed of Mr. E. A. S. Clarke, president of the Lackawanna Steel & Iron Co.; Mr. John A. Topping, president of the Republic Iron & Steel Co., and Mr. J. A. Farrell, president of the United States Steel Products & Export Co., with Mr. Clarke as chairman, laid out its plans so well and carried them out so effectively as to have made the meeting in all its details a pre-eminent success.

## Scope of the American Iron and Steel Institute.

By PRESIDENT ELBERT H. GARY, Chairman of the United States Steel Corporation.

At this first formal meeting of the American Iron and Steel Institute it is my privilege, and no less my pleasure, to felicitate the members on the success which has already been reached as the result of an earnest and untiring effort on the part of each to engender a feeling of affection amongst the members and to promote the welfare of the Institute regardless of any personal or selfish interest. The disposition you have shown, if maintained, will result in benefits that cannot at this time be measured. Especially are we to be congratulated that so many from foreign countries are with us. We realize that these visitors are men of important affairs, and have in their charge and control properties and business of great magnitude which they could not leave even for a short time without considerable sacrifice. We understand they are here to evidence a desire, so far as practicable, to work with us in the endeavor to better the conditions of all.

In behalf of the Institute I bid these foreign gentlemen thrice welcome. We are delighted with their presence, and we are proud of their acquaintance. We offer to them our congratulations for their achievements in their own respective countries, personally and as representatives of large aggregations of wealth and business. With no spirit of envy do we read of their prosperity. For many years we have been learning from them, adopting their discoveries and their methods. It shall ever be our aim to co-operate with them in placing and keeping upon a better basis the lines of business in which we are engaged, and in cementing the friendship which exists and which we hope may be permanent, not only as between them and ourselves, but as between their countries and our country. Before their departure we hope to give to them proofs of the sincerity of our professions of esteem.

### The production of

Iron ore in the United States and Canada, during the year 1880, using in all cases round numbers, amounted to.....		7,000,000 tons
in 1890.....	16,000,000 "	
in 1900.....	27,500,000 "	
in 1909.....	53,000,000 "	
Pig iron.....		
in 1880.....	4,000,000 "	
in 1890.....	9,000,000 "	
in 1900.....	14,000,000 "	
in 1909.....	26,500,000 "	
Steel.....		
in 1880.....	1,250,000 "	
in 1890.....	4,300,000 "	
in 1900.....	10,000,000 "	
in 1909.....	25,000,000 "	

The increase in the production of steel did not correspond with the increase in the production of pig-iron, for the obvious reason that a good deal of scrap was melted, and, therefore, iron was used the second time.

### The production of

Coke, in 1880 amounted to.....	3,500,000 tons
in 1890.....	11,500,000 "
in 1900.....	20,500,000 "
in 1909.....	41,000,000 "

If the ratio of increase during the next 20 years should be the same in each decade over production at the close of the preceding decade as that which took place in the 10 years from 1900 to 1909, there would be produced of

Iron ore, in 1920.....	102,000,000 tons
and in 1930.....	197,000,000 "
Pig iron, in 1920.....	50,000,000 "
and in 1930.....	94,500,000 "
Steel, in 1920.....	62,500,000 "
and in 1930.....	156,000,000 "
Coke, in 1920.....	82,000,000 "
and in 1930.....	166,000,000 "

As the figures given commence from a low basis in 1880, it is probable the ratio of increases for the next 20 years is not justified. However, if the increase in tonnage during that period shall be the same in each decade over the production at the close of the preceding decade that which took place in the 10 years from 1900 to 1900, inclusive, then and on that basis the production of

Iron ore, in 1920 would be.....	78,500,000 tons
and in 1930.....	104,000,000 "
Pig iron, in 1920.....	39,000,000 "
and in 1930.....	51,300,000 "
Steel, in 1920.....	40,000,000 "
and in 1930.....	65,000,000 "
Coke, in 1920.....	61,500,000 "
and in 1930.....	82,000,000 "

Reference has been made to the magnitude and growth of the iron and steel industry of America, as evidenced by these figures, for the purpose of emphasizing the importance and the opportunities of the American Iron and Steel Institute, and the necessity for its existence.

There have been for some time other associations which were calculated to develop and improve the iron and steel industry by the accumulation and distribution of statistics, or by the study and discussion of numerous technical questions, and these associations have been very successful and satisfactory; but it has been felt they were not, in practice at least, of sufficient scope and breadth to fully cover all the necessities of those who are engaged in or connected with the iron and steel trade. Due credit has been and will be given to those organizations, and there is no disposition to antagonize or interfere with or detract from any of them. On the contrary, we hope, directly or indirectly, to affiliate with them and assist in the good work in which they are engaged.

It seemed to the great army of individuals who have been particularly interested in successfully conducting this branch of industry that they had not prior to the formation of this Institute a com-



mon meeting-place where it would be appropriate to consider any and all of the important questions which apply to their lines of activity. In some respects, at least, methods had theretofore been unsatisfactory. Each individual was to some extent managing his affairs without regard to the rights or interests of others. The results are well known, and have been so frequently referred to as to make it unnecessary to dwell upon them at this time. That it was essential to do something to change and improve these conditions we all insist.

And so this institution was created upon a basis so broad that there is no limit to the good which may be accomplished. Its object is to afford means of communication between members of the iron and steel trades upon matters bearing upon their business affairs. Of course, this does not mean the undue advancement of the claims of any member to the prejudice of other members or of anyone outside.

As stated by many of you during the period of formation of the Institute, it is intended that ethical questions shall be considered as important as economic or scientific questions. The rights and duties of each member, so far as his conduct relating to this particular department of industry is concerned, and within the lines of propriety, should always be matters for the deliberation of the whole membership of the Institute. The level occupied by the Institute is high, and its management must always be above reproach, and in all the questions which may properly be considered by the Institute the pecuniary interests and the honor of each member are alike involved.

These general references are made because they are in accordance with the pronounced opinions of the charter members, and should be emphasized at the outset.

Primarily the Institute was organized, and should be conducted, for the benefit of its members. It should result in decided pecuniary advantage to all. The opportunities for presentation and discussion of economic or scientific questions are likely to give all a clearer understanding of all the facts and circumstances applicable to the management of the factories, and furnaces, and mill, and their connections, so that everyone possessed of the necessary knowledge may deal with reference to the rights of all concerned.

Also, the consideration and discussion of ethical questions particularly affecting those outside of the membership but connected with or interested in the conduct of their affairs, should be deemed just as essential and should result in material benefit to all.

There are many subjects of importance in which as members of the Institute we are concerned, and they should be discussed, but a few only can be referred to in this address.

One of the most important business matters at this time, and perhaps at all times, is the maintenance of stable conditions in the iron and steel industry, and to this is attached the question of prices. For periods, at least, in the past unsatisfactory conditions have been the rule, and not the exception. Violent, sudden and wide fluctuations in prices have occurred, and they have been detrimental to everyone connected with the business and to the public generally. The steel and iron industry, more or less recognized as the barometer of trade, has had an influence on general conditions for good or bad, and much of the time for bad. We do not, and never have, advocated fixed, unchangeable prices. If they are unreasonably high they should be lowered, and vice versa. If for any good reason at any time we are convinced that the rights and interests of ourselves, our employees or our customers demand de-

creases in selling prices or the readjustment of prices, we should be prompt to make them. This does not, however, militate against the general proposition in favor of stability as opposed to demoralization. We know, as matter of fact, from most careful observation and an abundance of testimony from those directly affected, that the maintenance of fair prices and the prevention of sudden and wide fluctuations is desired by our customers themselves. If you suggest that many members of this Institute are purchasers or consumers of the commodities produced by others, and therefore may object to the position taken, the obvious answer is that they do not object. Many of them purchase with the view of converting or refining and selling the product. Many have stacks of materials on hand from time to time, and cannot afford and do not desire to have the values of inventories reduced. Besides, consumers like to feel that they can depend upon prices which they pay being as low as the prices which their neighbors subsequently pay. We are all purchasers and consumers of one thing or another. We sell certain manufactured products, but we buy a greater variety of products, and we like to feel that we are at all times treated as our neighbors are treated. If we go to the tailor, the butcher, the grocer, the farmer, the railroad company, the steamship line, the telegraph office, the newspaper office or any others having for sale that which we need and buy, we are better satisfied if we are certain we are treated like our neighbors, and that there will be no sudden and material decreases immediately after we have bought and before we have had opportunity to consume the product which we have purchased. It is pleasing to note that in much of the business transacted in this country, commercial, financial and industrial, there is a tendency toward an even, steady and continuing basis of action. It would be better for us all, and better for the country, if conditions in all departments of business were more stable and less likely to be disturbed by agitation, doubt or distrust. It has sometimes been urged that an effort to maintain reasonable prices for iron and steel is contrary to the natural laws of trade; that it is opposed to the law of supply and demand. This we do not admit. We do not undertake nor advocate anything which is unreasonable, unnatural or unfair. Those who oppose the maintenance of fair prices when the volume of business is low on the ground that it is contrary to the law of supply and demand make the mistake of supposing that capacity to produce creates supply. The law of supply and demand means the quantity which one possesses and is willing to dispose of and the quantity which another desires to possess and is willing to buy. Capacity to furnish does not create supply, nor does ability to purchase create demand. It is just as illogical to say that because one is able to furnish a given quantity, that is evidence of the supply, as it would be to say that because another can use and has the money to pay for a certain quantity, that constitutes a demand. The whole question should depend upon mutual consideration and decision. The seller should never take advantage of the necessities of the consumer to unreasonably advance prices, nor should advantage be taken of the necessities of the producer to secure his product at an unreasonably low price.

What, then, should the manufacturer do at times when the consumer or purchasers are not willing to pay the price demanded, however reasonable it may be? Many of us at least believe he should reduce the output to meet the demand, much or little, and wait until those in need are willing to pay what is fair and right. Remember this assertion is based on the assumption that

prices at all times must be fair and reasonable and subject to reductions or changes whenever it is decided they ought to be made. Such reductions, however, should be made only after due consideration, and in an orderly way, and not as the result of panic.

On the other hand, if prices are at any time higher than they ought to be the consumer, whatever his pecuniary ability to pay may be, should wait until the prices are reduced. If the attitude of both seller and purchaser should be as suggested, it would not be long before they would get together on a proper basis, especially if what we advocate shall be carried into actual effect. What has been said is outside of and without reference to any question of special privilege or undue advantage or improper control of any commodity which would enable the producer, from motive of cupidity or otherwise, to fix or maintain unreasonable prices, or to take advantage of the necessities of the consumer. The great aggregations of wealth make this question important, but it may not be appropriate to discuss the same at this time.

Now, how shall we bring about the conditions which have been suggested as ideal?

The existence of this Institute and the large attendance on this occasion furnish the answer.

Real, hearty, cheerful and continued co-operation on the part of the members will secure results which should be entirely satisfactory. Frank and friendly intercourse; full disclosure of his business by each to the others; recognition by all of the rights of each; a disposition to assist and benefit each other so far as practicable and proper; conduct founded on the belief that healthy competition is wiser and better than destructive competition; all these are desirable and necessary, and will be effective.

Some of you may say that in your opinions, based on the past, a fair and just equilibrium cannot be maintained except as the result of some agreement on the part of those who are interested. It is a sufficient answer to make that you have no right to enter into such an agreement, express or implied; that the laws of this country are opposed to it. But, as stated by the Attorney-General of the United States on his argument before the Supreme Court in the Standard Oil case, the law does not compel competition; it only prohibits an agreement not to compete. If competitors are in frequent communication and make full disclosure to each other in regard to their business, notifying one another of what they are doing, it will follow as a natural result that no one will take advantage of the information he thus receives to act unjustly or dishonorably toward his neighbor. You know by experience this is so, and it will become more certain as time goes by and each of us realizes more fully his obligations to others and to this Institute.

Co-operation is broadening in its application to specific subjects growing out of the activities of life. We see it in many lines of business outside of our own. We see it in this country and in foreign countries. Especially have we observed it during the last few months in the consideration of some of the matters which have demanded the attention of the Interstate Commerce Commission and other official departments.

Co-operation can be and should be extended to our business relations with foreign manufacturers and producers. They will meet us halfway. Indeed, the presence at this meeting of so many distinguished and representative men from Great Britain, Germany, Austria, France and Belgium, respectively, is positive proof that they believe in this Institute, and are

friendly to its members, and have high appreciation of the efforts we have been making in the direction of conciliation and co-operation. Whenever and however we may have opportunity to meet these gentlemen and to legitimately co-operate with them in promoting and conserving their interests as well as our own, we should do so without hesitation. We must at all times evidence a disposition to reciprocate the friendship which these gentlemen have shown, and to demonstrate to their satisfaction that we believe thoroughly in the doctrine that we are more or less bound together by business connections, and that we enjoy prosperity when they enjoy it, and that we fail of success when they fail. Many who are present will live to see the time when the spirit of co-operation shall extend even to the government of the nations of the earth.

Again, there is no better way of advancing our own interests than to conduct ourselves in such a way as to make it certain we are endeavoring to promote the welfare of others with whom we come in contact. Uppermost in our minds should be the proper consideration of the rights of our employees. Members of this Institute represent corporations or firms who have in their employ hundreds of thousands of men. Many of these workmen are foreigners, who are not familiar with our language or customs. Some of them have been poor and have had few advantages in their native countries, and may not be fully able to protect themselves. Whether this be true or not, we should make it certain that all are so treated that they have the opportunity to be well housed, and well fed, and well clothed. So far as we can, we should lend our assistance to the improvement of the conditions of our workmen, and, of course, the wages paid should always be fair and reasonable. All of us have discovered since this Institute was formed that there were many things which we could do for the betterment of the conditions of the workman, and we have been prompt to do them. Particularly have we made great strides toward safeguarding our employees against accidental injury. A continuation of the efforts we have been making in this direction will result in securing a larger measure of confidence on their part, and will bring to us the consciousness that not only have we benefited ourselves pecuniarily, but what is more important, that we have done the right thing. Certain aspects of this subject will be presented in a special paper.

Also we should extend the spirit of co-operation to our customers. We should be sure at all times that we are treating them right. If it is claimed on any occasion by a customer that our prices are too high with respect to any commodity, we should promptly take up with him the question for the purpose and with the intention of arriving at a just conclusion. In all cases we advocate the doctrine of co-operation as opposed to independent action. We have found, particularly during the last two or three years, that we are succeeding better as we are brought into closer relations with our customers, giving them our confidence and informing them frankly of our conditions and intentions.

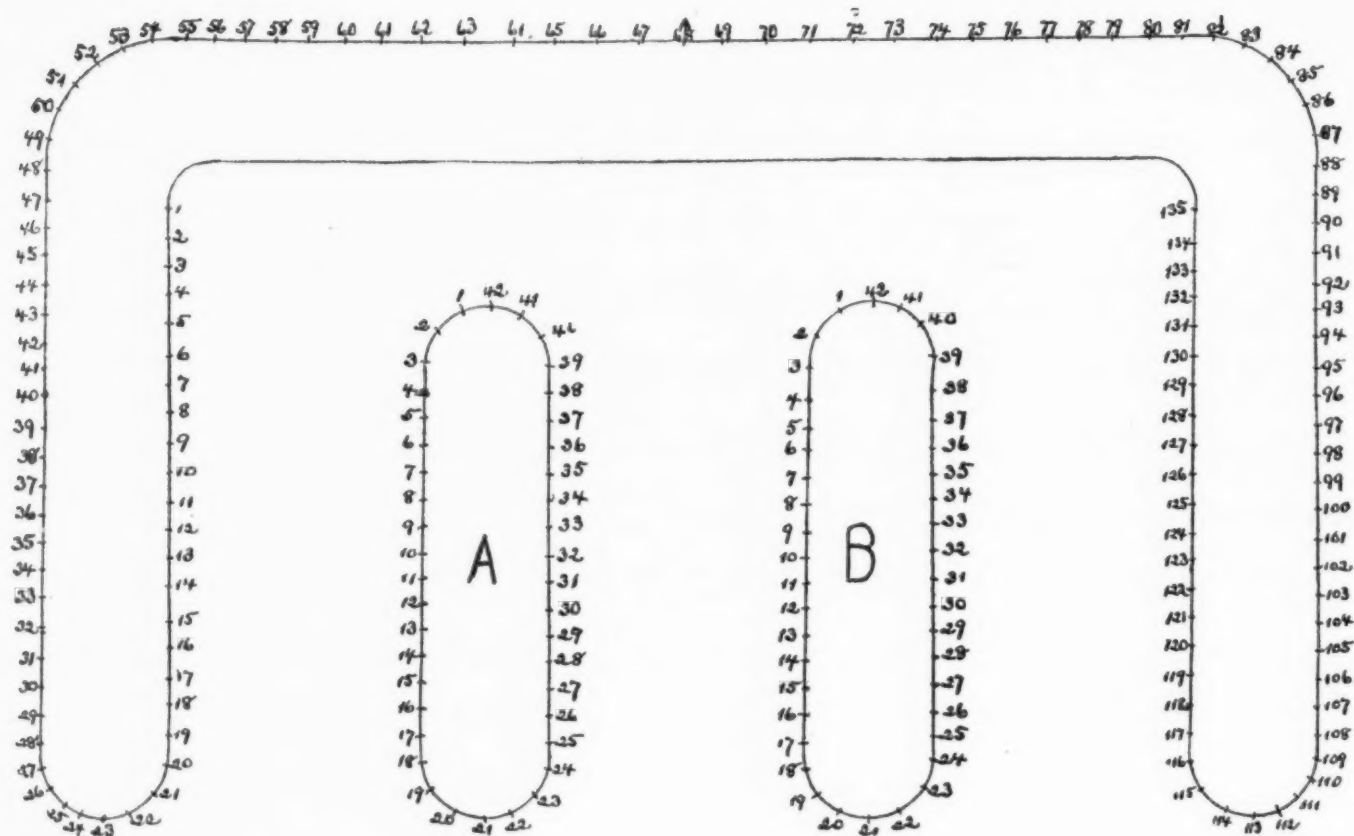
I predict for the Institute a great future. We are ambitious to have it prosper, and shall not be disappointed. So long as we pursue the path we have marked out we shall merit and receive the approval of all who are acquainted with our work. The influence of the Institute for good will be pronounced, and as it is better established and thoroughly known its opinions, as officially expressed on all matters which it may properly consider, will be respected.

For the honor you have conferred upon me personally in the election of your first president, and for the cordial support which you have extended without reserve, I thank you sincerely. For your confidence and friendship I am profoundly grateful.

## SEATING ARRANGEMENT AT THE DINNER OF THE AMERICAN IRON AND STEEL INSTITUTE.

Waldorf-Astoria,

October 14, 1910.



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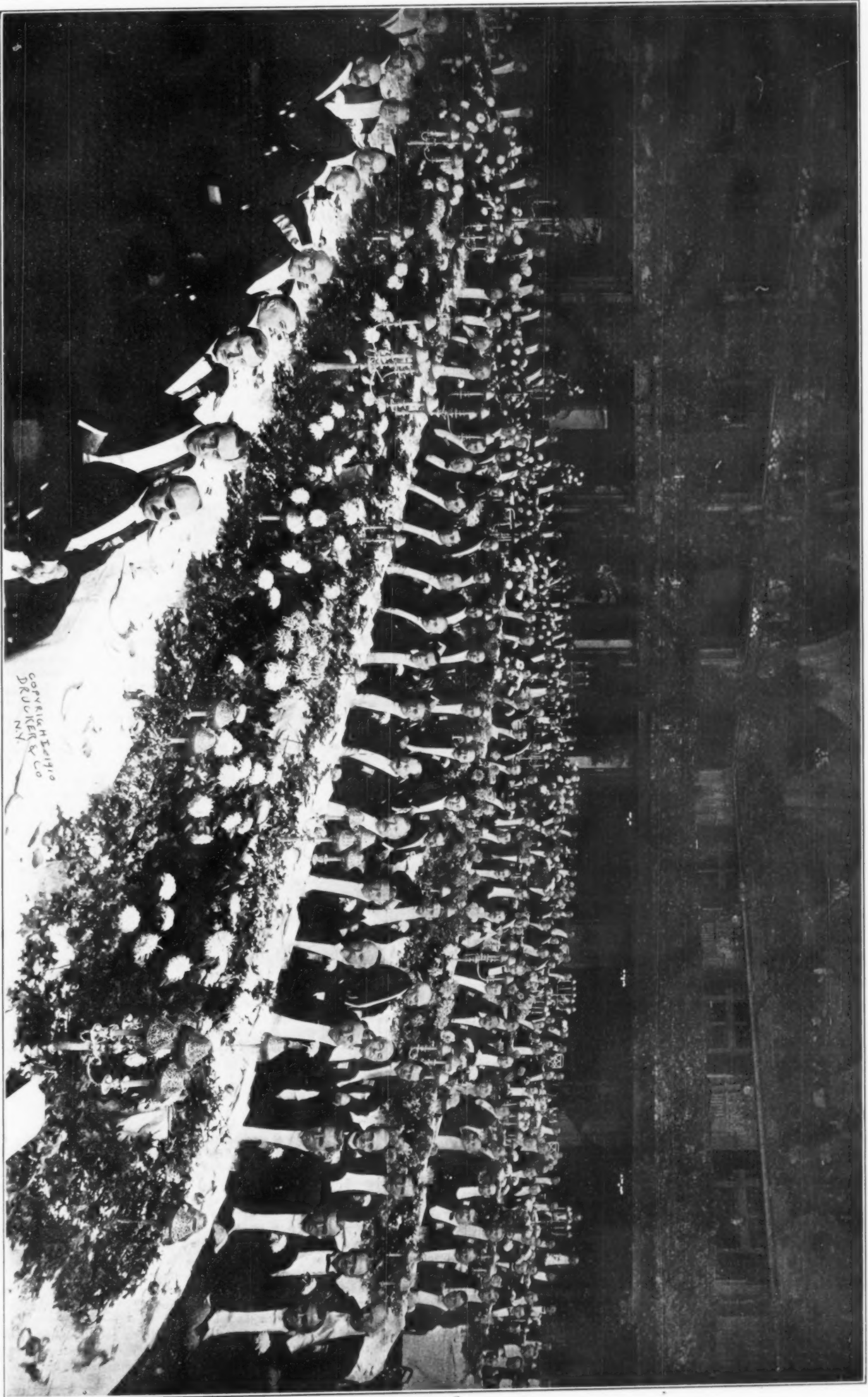
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FLASHLIGHT PHOTOGRAPH OF THE BANQUET SCENE OF THE AMERICAN IRON AND STEEL INSTITUTE.

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**IMPRESSED BY GARY.****Foreign Iron and Steel Men View the Great Plant.**

[Special Dispatch to Manufacturers Record.]

Chicago, Ill., October 18.

Approximately 175 members and guests of the American Iron and Steel Institute reached Chicago this afternoon in a special train consisting of 14 Pullman cars. The party arrived at Gary, Ind., this morning at 7 o'clock, and after breakfast inspected the entire works of the Gary plant of the Indiana Steel Co. and then were taken in automobiles all over the city. After finishing this inspection the train was switched from the tracks of the Lake Shore Railroad to those of the Elgin, Joliet & Eastern. The next stop was at South Chicago, where a visit was paid to the south works of the Illinois Steel Co. This consumed several hours, and the party reached Chicago at 5 o'clock, in time to attend the banquet given in their honor at the Blackstone Hotel.

At this banquet there were present not only several of the officers of the United States Steel Corporation, controlling the two above-named companies, but also about 25 guests of the Institute from Middlesbrough, Monmouth, Workington and Sheffield, England, and others from Glasgow, Scotland; Paris, France; Vienna, Austria; Belgium and Germany. Among other guests were Governor Deneen of Illinois, Sir Charles E. Allen of Monmouth, England; Baron von Bodenhausen of the famous Krupp Works of Essen, Germany, and many other notables, including more than 100 of the prominent business men of Chicago.

Your correspondent, in conversation with various members of the party, was struck with the genuine enthusiasm displayed by the visitors, and especially by the foreign visitors, regarding the unparalleled development of the city of Gary. It will be understood that less than five years ago what is now Gary was nothing but sand dunes and some little scrub vegetation. It is now a city of over 20,000 population, and the Steel Corporation alone has spent \$55,000,000, and will probably spend as much more within the next few years.

There have been excavated 8,000,000 cubic yards of material and over 1,000,000 cubic yards of concrete work have been required in the plant construction alone. One hundred and seven thousand tons of structural fabricated material have been erected. Such facts as these are undoubtedly impressive, and especially of unusual interest to the South, in view of the fact that it is generally understood that the Steel Corporation, which made Gary, proposes to carry out similar vast developments in Alabama as rapidly as the consumptive demand in the South justifies further expansion of the great plans it is now working out around Corey, Ala. Tomorrow the entire party will take an automobile ride and will visit the McCormick plant of the International Harvester Co., and after inspecting that plant will visit the stockyards, lunch at the South Shore Country Club, then visit the Pullman Palace Car Co. works at Pullman, Ill., and return from there by special train to the Pennsylvania Railroad Station at Chicago, whence they will leave at 6.30 P. M. for Pittsburg.

Judge Elbert H. Gary, chairman of the board of directors of the Steel Corporation; Mr. William E. Corey, president of the United States Steel Corporation; Mr. Frank Baackes, vice-president of the American Steel & Wire Co., and Mr. E. J. Buffington, president of the Indiana Steel Co., are among the notable men in the party, and the whole excursion is in charge of Mr. E. A. S. Clarke, chairman of the

entertainment committee and president of the Lackawanna Steel Co.

JOHN GLASS.

**COTTON EXCHANGE FUNCTIONS.****President W. B. Thompson of New Orleans Makes Suggestions.**

Mr. W. B. Thompson, president of the New Orleans Cotton Exchange, in a letter to Mr. H. L. Johnston, Fairburn, Ga., secretary of the Georgia Industrial Association, dealing with the Scott bill before Congress dealing with transactions in cotton futures, says:

"A cotton exchange is not a close corporation to be operated for the pecuniary profit of its members, or of a dominant faction of its membership, without regard to the interests of outsiders, or in opposition thereto. A cotton exchange has no right by its rules and regulations to favor one side of the market above the other, nor to serve the special interests of either the producer or spinner. Still less has such an institution the right to employ its machinery in the interest of the speculative division and against the interest of the spinner and producer; and still less, even, should it be used as the means whereby those who profit by speculative operations on one side of the market are favored to the detriment of the opposing speculative element and of the producer, manufacturer and consumer. An institution which so prostitutes its power is not only the object of just condemnation, but it has no right to exist; and furthermore, the great mass of people who are injured by such prostitution are in duty bound to demand, first, a voluntary recognition of their interests and rights by such institution, and, failing in this, second, to secure relief through legislative coercion.

"These principles are endorsed by all who are in the cotton business, as opposed to those who are in the business of skinning the public, and by those who recognize that the future contract is a necessary adjunct of the cotton business, when used as an adjunct, as distinguished from those who consider the manipulation of contract prices as the primary object of cotton trading, while cotton itself, and the interests of the thousands who, as producers, manufacturers and users are concerned therewith, are but secondary and incidental considerations.

"I recognize as unequivocally as anyone that the evils of misuse and manipulation of future contracts are seriously detrimental to the cotton trade; that these evils in fact exist, and that they should be abated. I differ, however, with some of our friends as to the proper diagnosis of the primary trouble, and also as to the means by which the evil developments should be reached.

"There are those who hold that future trading *per se* is wrong, and that the evils complained of are the logical and unavoidable consequences of the same, and hence insist that the proper and only remedy lies in the annihilation of the system itself. I hold that future trading *per se* is not wrong, but, on the contrary, is a trade necessity so woven into the fabric of trade operations that it cannot be summarily eliminated except at the cost of demoralization and return to the dark business ages. I am of the opinion that future trading is a natural, logical and essential accessory of a spot market, and when operated in conjunction with such spot market and under fair and equitable rules, is as necessary to the business of the legitimate trader as is his fire insurance protection. I think, therefore, that the complex problem of reforming this system should call for intelligent discrimination and not wholesale denunciation, and that the reformers should use the scalpel rather than the meat axe.

"Furthermore, I am of the opinion that a responsive future contract cannot be maintained in independence of an actual spot market, or in isolation therefrom; that the effort to maintain the same away from and independent of a spot market necessitates arbitrary and artificial methods of fixing the relative value of the several contract grades; that such arbitrary and artificial devices cannot result in other than fictitious values and discounts; and finally, that the power to control such valuation in the hands of a few men, and subject to manipulation by these as their interest may dictate, makes such a market so controlled the breeding grounds of the evils of which complaint is made. Or to phrase the conclusion differently, the existence and activity of such an artificial future market as I have outlined logically accounts for the abuses which have attracted general attention and condemnation.

"In the earlier stages of the crusade against future trading the voice of him who advocated the complete and utter destruction of the system was heard loudest in the land. Inability to carry through such a drastic program, and a better general understanding of the question, have relegated these uncompromising agents of devastation to the rear. But the fight has been by no means abandoned. In the stead of the standpatters a body of advocates apparently more conservative, but in reality more dangerous, have taken the field. The platform of these latter-day advocates is that they would not destroy future trading, but only those phases of it that are injurious and demoralizing. This is a perfectly sound principle, and as a battle cry will attract a multitude of supporters. But the means whereby they propose to effectuate this benign purpose are either by intention or through ignorance as fatal to the system as the original direct attacks. The danger of the movement lies not in its avowed purpose, but in the weapons by which it is proposed to effect this purpose. They propose to cure a pain in the head by a blow of a battle axe. The Scott bill now pending in Congress is a complete exemplification of this species of curative achievement.

"The advocates of the Scott bill may be roughly divided into three classes: Those who want to abolish cotton future trading in toto and are not particular as to the means by which it is done; those who desire to retain the system shorn of its abuses and endorse the bill upon the representations of its sponsors that it will accomplish this end, not understanding the bill and in many instances incapable of understanding it, and those who are entirely competent to analyze the bill for themselves and understand its destructive import, but who have not given it critical attention, and who, although opposed to radical action, have through carelessness and upon general principles joined in the clamor for its enactment."

After discussing the provisions of the bill, Mr. Thompson says:

"The New Orleans Cotton Exchange appreciates the expressions of good-will on the part of the spinners, both as individuals and as organizations, and is gratified by the commendations which its efforts to perfect the future trading system have received from the same sources. We have endeavored to provide a form of contract and a system of rules and regulations, all of which are fair alike to buyer and seller, based upon an actual spot market and responsive to actual conditions there prevailing. In our deliberations looking toward this end we have invited the spinners and the producers and all who are interested in this important problem of the cotton trade to confer and advise with us in relation thereto. We have gratefully

received the suggestions of a committee of the American Cotton Manufacturers' Association and have profited by the cordial exchange of ideas and views which has transpired between them and ourselves. We are gratified to know that, in the opinion of this committee, we have done well, although they do not give us an unqualified endorsement. From the information at hand it would appear that the respect in which we are not commended relates to the range of grades deliverable on our contract. I observe, by reference to your pamphlet of proceedings, that one of the members of the said committee stated to your convention that if we would strike out of our contract every grade below low middling and every grade above good middling our exchange would be almost ideal. This member may not know that our grade standards have normally been high, and much higher than the standards of some other markets; and furthermore, that by the adoption of the United States Government standards our standards have been raised still higher, so that now the lowest grade deliverable on our contract is almost as good as the low middling of a few years ago, and better than the low middling standards of some other markets."

In conclusion Mr. Thompson says:

"Knowing, as I do, the merits and fairness of our contract and system, and hearing, as I have, the expression of appreciation and approval from our Southern spinners, and heeding, as I must, the strictures emanating from the same sources and directed against the methods of the other American future trading exchange, I have been at a loss to understand why the spinners, and particularly the Southern spinners, should not use our market and our trading system to a greater comparative extent than they do. Inquiries along this line apprise me that this apparent inconsistency between word and deed is primarily and largely due to two contributing causes: First, the brokers in the Northern market extend an exceedingly liberal line of credit to those who use their contract market, whereas the brokers on the New Orleans Exchange require that transactions therein shall be protected by sufficient deposits. And second, the facilities afforded by the telegraph companies for communication with the New York market are much better and more expeditious than the like facilities for the transaction of business with the Southern market.

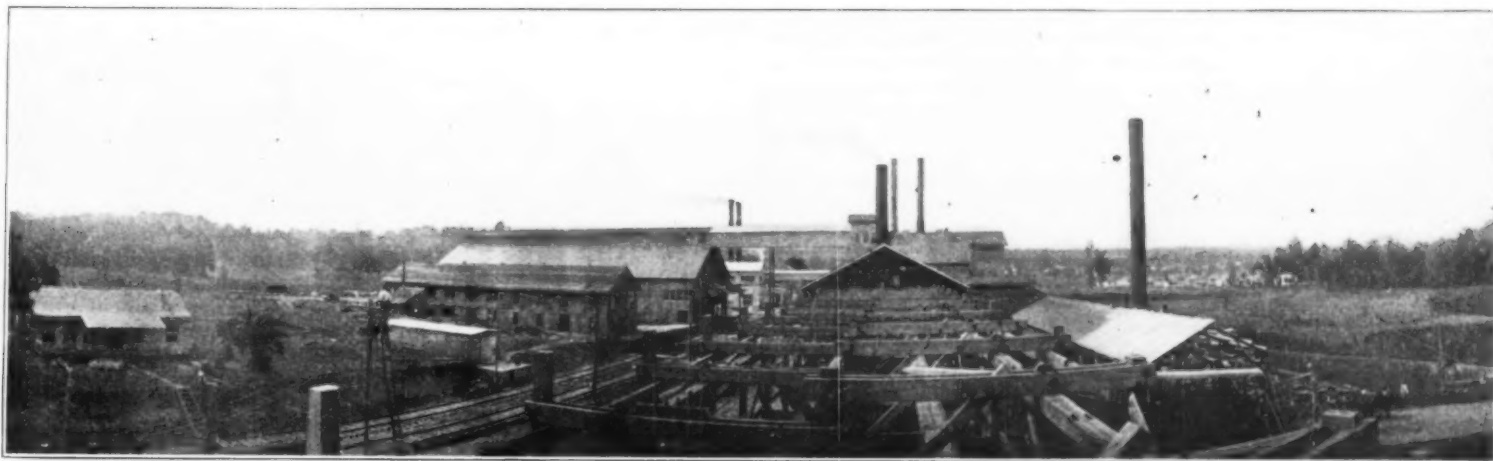
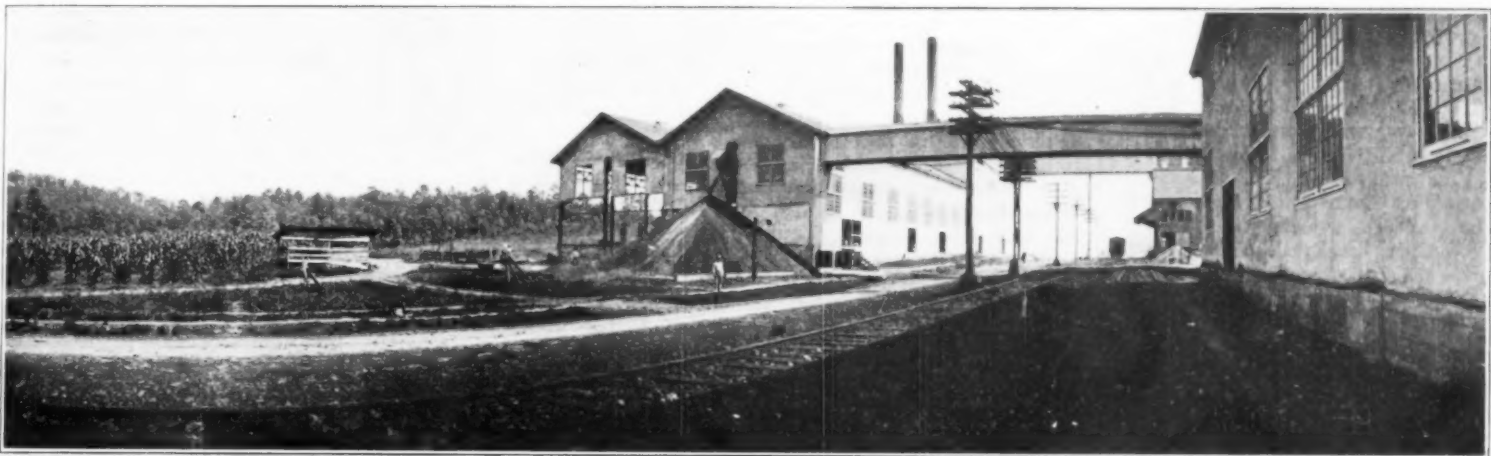
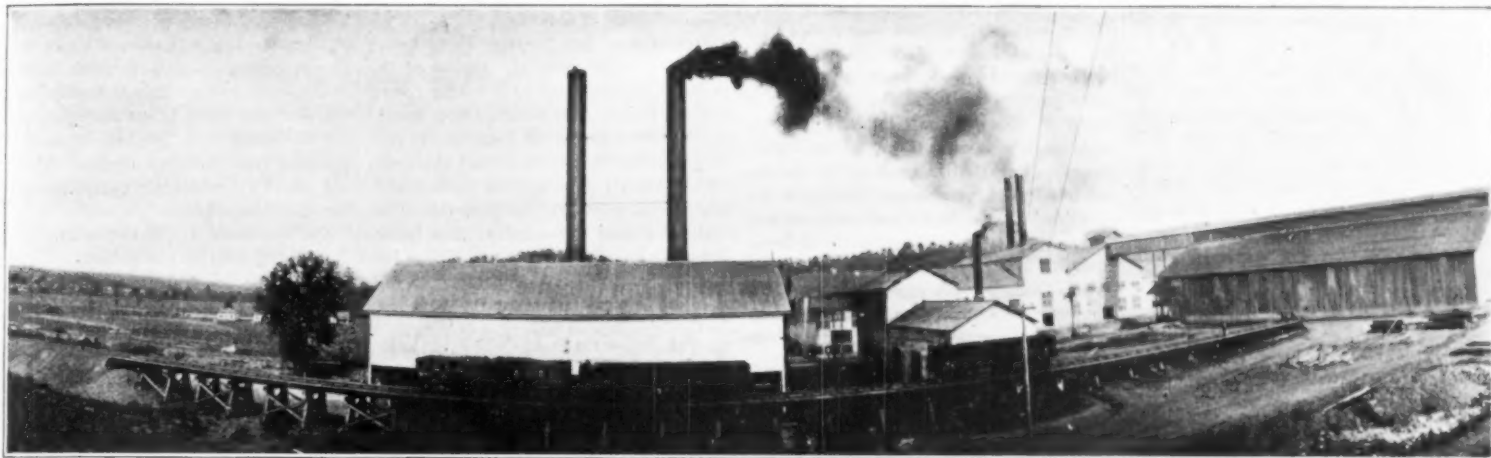
"If the first expedient is, in fact, a cause contributing to the condition noted, I do not think that the explanation reflects much credit either upon the parties offering the inducement or upon those accepting the same. Loose credit is not characteristic of sound business propositions, and especially not when the effect is to encourage the excessive extent of speculation which most of us agree should be restricted. And as for the trader, surely it cannot be admitted that playing in an unfair game is justified by the fact that it may be done on credit.

"The second objection noted is valid. It is a patent and undoubted fact that the telegraph companies do discriminate against the New Orleans market, or, to put it in another way, do afford vastly superior facilities for the transaction of business between interior points and New York than between such points and New Orleans. But this obstacle, I believe, could be removed by a determined demand and concerted effort on the part of the spinners and the New Orleans merchants interested."

Within the past three and a half years San Antonio, Tex., has laid more than 150 miles of cement sidewalks at a cost of \$450,000.



## THE ATLANTIC &amp; GULF PORTLAND CEMENT CO.'S PLANT AT RAGLAND, ALA.



The latest modern Portland cement plant to be completed in the South is that of the Atlantic & Gulf Portland Cement Co. at Ragland, Ala. Its initial installation of 1200 barrels daily capacity is now in full operation, and has been shipping cement for the past six weeks. The ultimate installation will provide for an output of 3000 barrels daily. The plant represents an investment of \$1,500,000.

The company owns over 5000 acres of land, extending from the city limits to the Coosa River. In this area is included a dense growth of valuable timber, while beneath the surface it is claimed are found in practically inexhaustible quantities all of the raw materials necessary to the manufacture of Portland cement, including high-grade limestone, shale and clay, and bituminous coal.

The buildings, all of which are of steel and concrete construction, cost, including equipment, over \$1,000,000. They are so laid out that the material moves continuously from the entrance of the raw material to the completion of the product. The

quarry is located about 8000 feet from the mill, to which the stone is conveyed by a Bleichert aerial tramway system installed by the Trenton Iron Works, Trenton, N. J., the buckets being 250 feet apart and traveling at a speed of 550 feet per minute. The buckets dump directly into an electrically-driven crusher, which is a No. 7½ Gates gyratory made by the Allis Chalmers Company, Milwaukee, Wis., which reduces the stone sufficiently to pass a two-inch ring. The crushed stone is then elevated to a large bin directly over the scales. The shale is obtained from a hill 300 feet from the shale building. It is brought in by means of an incline and dumped upon the belt conveyor, which carries it to a Webster disintegrator, from which it is conveyed to a rotary drier to dispel all moisture and then stored in the bin over the scales. The scales, which were furnished by the Richardson Scale Co., New York city, are automatic in action, and accurately measure in correct proportion the necessary quantities of stone and shale.

The mixed material is conveyed to a large storage bin feeding into a rotary drier, from which it is elevated to a bin directly above an Allis-Chalmers ball mill, which further pulverizes it. The material is then conveyed to bins located over five Fuller grinding mills furnished by the Lehigh Car Wheel and Axle Works, Catsauqua, Pa., which complete the grinding on the raw end.

Below the bins in which the now powdered material is stored are large brick chambers, into which the ends of the kilns project. In the center of this dust chamber is a hanging brick curtain, which tends to retard the current of heated gases and thus deposits most of the fine dust which otherwise would be lost through the stack. The kilns, four in number, are each 125 feet long and 7½ feet in diameter.

The equipment of the coal-grinding house consists of rolls for breaking up the lumps, a drier furnished by the Ruggles-Coles Engineering Co., New York, N. Y., for thoroughly drying it, and a Fuller mill for pulverizing it. The powdered coal is

fed into the kilns by Sirocco fans made by the American Blower Co., Detroit, Mich. The hot clinker is conveyed from the kilns to storage piles, where it remains for one month for seasoning. Bucket conveyors running under the storage pile remove the cold clinker and carry it to the finishing grinding department, where it is passed through a crusher reducing it to uniform size. A small percentage of gypsum to regulate the setting of the finished product is here added, after which the material is fed into Fuller mills, which finally pulverize it to the necessary fineness.

The now completed Portland cement is conveyed to the large stockhouse, having a storage capacity of 100,000 barrels. At the end of this stockhouse is the packing and shipping department, which is equipped with an automatic weighing and bagging system installed by the Bates Valve Bag Co., Chicago.

All of the equipment is driven by electricity, which is supplied by two 1000-horse-power cross-compound engines made by the Hardie-Tynes Manufacturing Co.,

Birmingham, Ala., which operates two generators of 600 kilowatts each. Steam for the engines is supplied by the battery of Geary water-tube boilers furnished by the Oil City Boiler Works, Oil City, Pa.

A fully-equipped machine shop, blacksmith shop and supply-house is maintained in order that repairs may be made in short order. A laboratory is provided, fully equipped with apparatus for analyzing and testing the materials and product. This is constantly done to insure a uniform quality of material.

About 200 men are employed at the plant, and the company has provided for these ample living quarters, with all modern sanitary conveniences.

The plant is well located for the shipment of its product over an important consuming area, being directly on the Seaboard Air Line, spur tracks from which extend throughout the plant, the aggregate length of these being five miles.

The officers of the company are: W. B. Shaffer of Nazareth, Pa., president; John S. Osterstock and H. K. Hartzell of Pennsylvania, vice-presidents; George Crane of Lancaster, Pa., treasurer, and W. S. Wilson of Philadelphia, secretary. M. W. Shaffer is general superintendent, and Clarence N. Wiley, chief chemist.

The product of the plant, which will be known as "Coosa" Portland cement, will be handled by the Kirkpatrick Sand & Cement Co., Birmingham, Ala., as general sales and distributing agent.

## EGYPTIAN "WHEAT" IN TEXAS.

### An Official Statement Regarding Its Possibilities.

Recent publications in Eastern newspapers were to the effect that Prof. F. W. Mally of the Texas Department of Agriculture had issued a statement that extensive experiments in the Lower Rio Grande Valley with Egyptian wheat had demonstrated that the average yield had been 280 bushels per acre, the yield being obtained from three cuttings of the grain. A letter from the MANUFACTURERS RECORD inquiring as to the accuracy of this report brings the following from Professor Mally:

"Referring to your inquiry with reference to the yield of 280 bushels of Egyptian wheat per acre in the Lower Rio Grande Valley, will say that I did not report any such yield, but merely explained to the author of the article that I thought under special conditions of fertility of soil and proper management that it might be possible that 280 bushels per acre of this grain could be raised by securing three cuttings. Of course, if the management fails to get three cuttings, or if they fail in the management of any portion of the crop, the yield will be far short of this. However, I will say that I saw several small fields which were test acreages which certainly must have yielded very nearly 100 bushels per acre of grain at the first cutting. I have not seen subsequent cuttings, but in one or two instances the second growth has been very satisfactory, and will yield approximately as much as the first. Whether they got the third cutting I am not in position to say at this time.

"I may say that under a system of dry-land farming this crop has been known to produce 50 to 60 bushels of grain, and even as much as 30 bushels per acre under an extreme drought when other crops failed entirely. This is not a wheat at all, but is a member of the sorghum family. It is variously known as California wheat or Mexican wheat, but is in fact what is known as 'Shallu' in European countries."

The paper by Prof. G. T. Surface of Yale University on the commercial woods of the United States and their uses has been reprinted from the Bulletin of the Geographical Society of Philadelphia.

## A NATURAL DISTRIBUTOR.

### Huntington's Location as to Vast Natural Resources.

[Special Cor. Manufacturers Record.]

Huntington, W. Va., October 15.

Huntington stands today in a position peculiar unto itself. It has no parallel in any other city in West Virginia or throughout the tri-State country surrounding it. In olden days Indian trails led to the site where Huntington now is. Today it is the trail of fortune, chance and endeavor, and the spirit of progress, prosperity and development is to be found on every hand. These trails have their origin in vast timber, coal, oil and gas lands, and Huntington is at the outlet from the mountains to the thickly populated and prosperous land lying to the north and northwest of the Ohio River. Huntingtonians claim that nothing can keep this from being the first city in West Virginia within another decade, with her population easily 100,000.

Huntington is built upon a plateau along the Ohio River. It has abundant acreage for building sites; has splendid railroad facilities now, with additional railroads headed this way; with a population of almost 35,000, a gain of 162.1 per cent. since the census of 1900; with more than \$1,000,000 invested in municipal development by the residents within the past year, and \$500,000 now being spent by the city in the same manner; with contracts on hand calling for the expenditure by the property-owners of at least \$1,000,000 within the coming year; with people moving in from all sections of the State and going into business; with every storeroom in the city occupied and more new buildings being erected than ever before in the city's history, there is every reason to look forward to the day when Huntington will be the acknowledged first city in the Mountain State.

These are but the local advantages; the vaster and wealthier advantages lie back of the city among the rock-ribbed, timber-covered hills and the winding valleys of the Big Sandy, Guyan and Twelve Pole. Here it is that vast tracts lie, covering millions of dollars' worth of coal; where billions of feet of timber are held within the confines of primeval forests; where great pools of oil and mighty reservoirs of natural gas are held awaiting the developing hand of man. In easy reach of all this wealth is the Huntington of today.

Huntington is the natural distributing center for all this store of riches that is just being opened to all the markets of the world.

In the coal fields of Fayette, Kanawha and McDowell counties alone, through which the Chesapeake & Ohio Railroad runs directly into Huntington, there are today coal operations representing in value more than \$300,000,000. Here are the great Guggenheim, Dixon, Berwind-White and other interests, all controlling vast tracts of coal lands, the enormous wealth of which is unquestioned, and the operation of which must go on for a century to come before the deposits will be exhausted. All of this, including the output from the great undeveloped fields of the Guyan Valley, will in course of time be marketed through this city, for it is the natural distributing center.

In addition to the natural advantages that are bending their power to shape the destiny of Huntington there is a Chamber of Commerce working hand in hand with every possible favorable circumstance. The result of that body's efforts has been the gradual but powerful growth of the city that resembles in its development those greater cities of the world that have never experienced a boom, but gone on and on to the full fruition of the hopes of their people. In competition with other towns in the State, and in the Ohio Valley, and

other towns of many more years, Huntington has outgrown them all and stands today second to but one city in West Virginia—the city of Wheeling.

Huntington is forging ahead with marked rapidity now, the effects of the financial depression of 1907 having passed entirely away. New factories have opened up, the larger industrial concerns are running steadily, employing several thousands of men, and before another twelvemonth has passed there will be other manufacturing interests in operation. The incoming of industrial enterprises is due not only to the excellence of location, to railroad facilities, but to cheap fuel that is to be obtained here in unlimited quantities of both coal and natural gas. The next few years will see the completion of the locks and dams in the Ohio River, and that will give permanent shipping facilities by water the year round. It is the future of Huntington that counts so greatly—a future that cannot be denied her.

And so Huntington is today fixed for a future that looks golden beyond the dreams of the citizen of 20 years ago.

The Guyan, Mud, Twelve Pole and Big Sandy rivers carry their timber supplies to the city's very doors. Three railroads, the Chesapeake & Ohio, the Baltimore & Ohio and the Norfolk & Western, represent the present railroad facilities, while branch lines penetrate all sections of the State, and the "Virginian," the great Henry Rogers system, is already tapping at the city's gates by the way of the Guyan Valley. It is this system that will bridge the Ohio at this point and command the vast coal traffic to the Great Lakes and add to the local transportation the Cincinnati, Hamilton & Dayton, the Kanawha & Michigan and one or two other roads. The extension of the Carolina, Clinchfield & Ohio Railroad to meet the Chesapeake & Ohio, on which work has already been begun, will open up an area of timber land that has never before been accessible to the market.

JAMES T. DUNBAR, JR.

## The Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., October 17.

Sales of pig-iron the past week were made more or less in spots, ranging in price from \$11 to \$11.50 per ton at the furnace for prompt shipment and for delivery over the balance of this year. One sale of 500 tons was reported on basis of \$11 at the furnace for prompt shipment; another sale of 600 tons at the same price. Other small sales for prompt and nearby delivery were made on basis of \$11.50 per ton at the furnace. This was particularly true of favored brands. While two or three of the furnace interests have made sales under \$11.50 per ton at the furnace, I know of the withdrawal of the \$11 price by the majority of the companies. Southern furnace companies, as a rule, continue to "fight shy" of making sales for next year delivery. Some first quarter business is being taken on at \$11.50 per ton at the furnace—some little second quarter iron. First half sales are exceedingly scarce.

Some small sales of water pipe are reported. Salt Lake City purchased 1500 tons; Kansas City, Mo., 1500 tons; Kansas City, Kans., about 1000 tons. The Detroit order for something like 7200 tons was placed during the week, and it is understood that some very low bids on this business were received, going as low as \$17.50 to \$18 per ton at the seller's plant. Competition on this business was sharp; hence the unusually low bids. As far as Southern manufacturers are concerned, there has been practically no change in prices, and no material change for the better is looked for until there is some reaction in pig-iron. Following prices are quoted per net ton f. o. b. cars here: Four

to six inch, \$20; 6 to 8-inch, \$19; 8 to 12-inch, average of \$18.50 to \$19, with \$1 per ton extra for gaspipe.

The actual tonnage of scrap disposed of by local dealers will show a small total. However, there is no perceptible increase in stocks on yards. This is mostly due to the fact that there is not enough margin for the seller to induce him to turn the material loose to scrap dealers. Following prices are nominally quoted per gross ton f. o. b. cars here:

Old iron rails, \$13.75 to \$14.25.  
Old steel rails, \$11.50 to \$12.  
Old iron axles, \$16.50 to \$17.  
Old steel axles, \$15.50 to \$16.  
No. 1 railroad wrought, \$11 to \$11.50.  
No. 2 railroad wrought, \$10.50 to \$11.  
No. 1 machinery, \$10 to \$10.50.  
No. 1 steel, \$9.50 to \$10.  
Old standard car wheels, \$12 to \$12.50.  
Light castings, stove plate, \$8.50 to \$9.

## To Celebrate Canal Opening.

[Special Cor. Manufacturers Record.]

Raleigh, N. C., October 17.

The people of Beaufort, Morehead City and Oriental, all towns at or near the southern end of the canal on which the United States has been at work since November, 1908, will join in the celebration of the opening of the inland waterway about December 1. The two dredges working at the northern and southern ends of the canal cut will meet about November 15, but there will be some little cleaning up to be done afterwards, so that the canal will be open for traffic December 1. On the first of October the two dredges were 2850 feet apart, and were progressing at the rate of 2000 feet per month. They are now having very little difficulty from roots and stumps and sunken logs, having passed through the worst section and gotten into fairly easy digging, but on account of the very high bank at which they are working, the surface of the water being about 10 feet below the surface of the ground, they cannot make very rapid progress.

## Big Texas Irrigation Enterprise.

The Pecos & Toyah Lake Irrigation Co. of Pecos, Tex., capitalized at \$1,500,000, has filed its charter. This company holds title to more than 22,000 acres of Pecos county land to be irrigated and 8738 acres to be used as a reservoir. It proposes to build an irrigation ditch 65 miles long from the overflowed waters of the Pecos River through Sand Lake and Toyah Lake to the Pecos county land. Messrs. J. N. Levin of Rutherford, Tex., and R. S. Johnson and B. H. Beauchamp of Pecos were the incorporators. Associated with them as directors are Messrs. F. E. Dobbins, Chas. A. Loomis and L. H. Baker of Kansas City, Mo., and Frederick W. Taylor of Lincoln, Neb. The MANUFACTURERS RECORD referred to this enterprise some weeks ago.

## Dallas Paving Costing \$590,000.

From time to time the MANUFACTURERS RECORD has referred to paving improvements planned and under construction at Dallas, Tex. The city is continuing its activity in this direction, and it is understood that data in the office of the city engineer shows a total of \$590,000 being invested in permanent paving. A quantity of this work has been completed, some is in course of construction and other portions are yet to be arranged for.

## Hamblen County Road Improvements

The Hamblen County Pike Commission, Morristown, Tenn., presented its report last week, showing that with an expenditure of less than half of the recent \$200,000 bond issue it has made effective progress. The commission has graded 43 miles of road and macadamized 23 miles of road, leaving about 45 miles to be constructed.



## THE DRAINAGE OF NORTHEASTERN ARKANSAS—II

By ARTHUR E. MORGAN, Associate Member American Society of Civil Engineers and Member of the Morgan Engineering Co. of Memphis.

[Written for the Manufacturers Record.]

The agricultural development of the district in Northeastern Arkansas, discussed in a previous paper, is to a considerable extent dependent upon its settlement by persons coming from nearby States on the north and east, and perhaps no other change in present conditions aside from drainage would prove to be so great a stimulus to immigration from that section as the practical elimination of malaria. This disease is perhaps no more prevalent in Northeast Arkansas today than it was in Illinois and Indiana a generation ago. In the parts of these latter States which have been thoroughly drained malaria has become almost a thing of the past, and with the thorough drainage of this region it will probably pass away here as well.

The fact has become thoroughly established that a certain species of the mosquito is responsible for the spread of malaria, and that there will be no malaria where there are none of these mosquitoes. We know, moreover, that the mosquito breeds in shallow, stagnant water, and seldom comes to maturity in water in which there are fish or minnows. The thorough drainage of this territory will doubtless remove the disease, and there is probably no other effective means for doing so.

In the construction and maintenance of the St. Francis reservoir the development of fisheries should not be overlooked. The importance of this subject may be inferred from the following reference to the value of fisheries in the submerged areas along the Lower Illinois River, on page 54 of the Illinois Waterway Report of 1909:

"The 80,000 acres of submerged lands have a high value for fish culture, the present yield bringing \$10 per acre to the fishermen, while the consumer pays double. It is not too much to expect that this crop will increase to a value of \$15 to \$20 per acre in the future, or amount to \$1,200,000 to \$1,600,000 annually. Any policy of reclamation should jealously guard this source of wealth."

The St. Francis reservoir would have an area somewhat larger than that above mentioned, nearly all of which is now declared to be Government property. On taking up the subject with the Bureau of Fisheries of the Department of Commerce and Labor, the acting commissioner stated that the value of fisheries of the proposed St. Francis reservoir would perhaps be greater than that of any artificial reservoir in the United States. In a letter on this subject he states:

"This office is strongly imbued with the belief that there are here presented great possibilities for augmenting the food supply for a large area, providing business and pleasure for many people, insuring the preservation and increase of the food and game fishes, and establishing a fish nursery of which the surplus production may be used for the stocking of other waters."

He further states that the Bureau of Fisheries would co-operate with the district to the fullest possible extent in developing the fisheries value of the reservoir. Whether the area should be developed for commercial fishing, as has been done on the Illinois River, or whether the district as a whole would derive a larger income from it as a fishing and hunting reserve, thus attracting a large number of people to this region during the hunting and fishing season, is a subject requiring careful consideration. In any event, it appears that the St. Francis reservoir may become a very important source of revenue.

The cost of irrigating rice is from \$5 to \$10 per acre per year. The water in the St. Francis floodway and reservoir, flowing above the surface of the ground, would furnish a supply of water by gravity for many thousands of acres of rice in the area west of the floodway. Water from this source could be furnished at half the cost of present methods of irrigation, and at the same time return a considerable income to the district. The great area of the watershed would insure an unfailing supply of water, which would be required for the most part during a season when there would be an abundant flow, so that the use of water for this purpose would not greatly interfere with its use for power. Moreover, the water would have two to four times the value for irrigation which it would for developing water-power.

With the further development of this territory the ability to procure a gravity supply of water for irrigating such crops as potatoes, sweet potatoes, cabbages and celery for the Northern market may become an important consideration. Small reservoirs for rice irrigation may be formed in the construction of collecting ditches along the base of Crowley's Ridge.

In the development of an efficient highway system, thorough drainage for the roadway foundation is indispensable. No other factor in road-building is of greater importance. The improvement of the proposed district according to the plan submitted would produce excellent surface conditions for a complete system of highways. In addition, many of the lateral ditches are so laid out as to be good locations for roads, and their waste banks, on being graded down, would require little improvement except surfacing.

Lumbering operations are now much interfered with through the difficulty of hauling during the wet seasons. In fact, many parts of the district are so wet that lumbering cannot be carried on economically at any time of the year. The construction of the proposed floodway system, with the proposed improvement of Tyrone River and right-hand chute and the smaller ditches along the State line, would accomplish as thorough drainage for almost the entire territory as would be needed for lumbering operations. A large number of lateral ditches will be necessary to fully redeem the land for agricultural purposes, but except in a few instances, such lateral ditches will not be necessary until the land is cleared. It is a notable fact that in the promotion of many large drainage projects in the lower Mississippi Valley lumbermen have been among those most actively promoting the improvements, on account of the benefits received directly through the reduced cost of operation.

The benefits of the proposed improvement to railroad companies would be of two kinds: First, the actual benefit to the right of way through making a more stable roadbed and in reducing the cost of maintenance; second, by increasing the business of the road through the development of the district. The first-mentioned benefit is probably the only one for which the railroads may legally be assessed, but the latter is by far the more important, and in view of this fact the railroads can well afford to adopt a liberal policy of encouragement to the district. The region is now nearly a waste except for a strip of land along the Mississippi River, and furnishes little traffic to the railroads except in lumber. With thorough drainage and development it will probably be capable of

supporting a denser population than any other region tributary to the roads which pass through it.

The generation of water-power in the Mississippi Delta never has been undertaken, and at first thought would seem to be impracticable. Yet in this drainage project there is opportunity for the development of a power plant which would be of large value in any growing part of our country, and should be all the more important here because it would meet with little if any competition from other water-power plants in the same region.

The conditions which make a power plant possible as a part of this project are these:

1. The St. Francis floodway must carry the water from about 4500 square miles of drainage area.

2. This water will flow over the surface of the ground between levees, and at the lower end will fall 17 feet to the ordinary low-water surface in Big Bay. By maintaining a low dam across the mouth of the floodway this head may be increased to 25 feet without interfering with the safe operation of the floodway.

3. The St. Francis reservoir may be used for storing water for power purposes without interfering with the use planned for it for flood storage.

We have here the three essential elements necessary for the production of power; a large drainage area in a humid region; opportunity for equalizing the flow, and a sufficient fall to produce power. The amount of flow at low-water stage cannot be determined accurately in advance of the construction of the drainage system, but it is believed, from a comparison of this with other streams, that it will not fall below 1000 cubic feet per second. By the storage of four feet of water in the St. Francis reservoir this flow can be doubled or brought to a minimum of 2000 second-feet, and this would not affect the use of the reservoir for flood storage as outlined in this report. Further provision for storage would make available 8000 second-feet in time of lowest water. Considering that 60 per cent. of the theoretical horsepower from 2000 second-feet falling 25 feet could be delivered as far away as Memphis (35 miles), we would have a resultant of about 3500 horse-power delivered in that city or to a point equally distant. The cost of this development would be approximately as follows:

Dam at lower end of St. Francis floodway.....	\$100,000
Reinforcement of levees at lower end.....	50,000
Three storage weirs in St. Francis floodway and reservoir.....	20,000
Generators and transformers.....	75,000
Transmission line.....	20,000
Water-wheels and accessories.....	25,000
Reserve equipment.....	50,000
Total first cost.....	\$350,000
Annual cost—	
5 per cent. interest on investment.....	17,500
Depreciation and repair, 10 per cent.....	35,000
Cost of operation.....	20,000
5 per cent. sinking fund.....	17,500
	\$90,000
Income when entire minimum supply is used—	
3500 horse-power at \$75 per annum, or about \$32 per horse-power per year for a 10-hour day, 365 days in a year.....	\$262,500
Profit over cost.....	172,500

The reservoir at the head of the floodway would make possible the use of the water during all or a part of the day, as might be necessary, so that, instead of 3500 horse-power for 24 hours, the production could be made 8400 horse-power for 10 hours. It is a common practice to sell electrical power at a given amount per horse-power per year, the charge each month to be based upon the highest amount used at any time during that month. As not all plants supplied by a system will use a maximum amount of power at the same time, it is common practice for the producing plant to sell two to four times as much power as is represented by the capacity of the plant. If all the power were

sold in this way at the rate of \$25 per horse-power per year to plants running 10 hours a day, the income would probably exceed \$75 per horse-power for the entire capacity of the plant. So far as we are aware, no power is now being sold in the Mississippi Delta for less than \$120 per horse-power per year for power actually used. The usual rate in small towns using electric light is about 10 cents per kilowatt hour, or about \$650 per horse-power per year. It is believed that the lowest rate at which power is sold in Memphis is \$130 per horse-power per year for power actually used to guaranteed users of large amounts.

Memphis, being within easy reach, would furnish the best market for power at the present time. This city now uses about four times as much power as would be available from this plant. It would probably be advisable also to build a transmission line through Wynne, Harrisburg and Nettleton to Jonesboro. As the actual cost of producing electric power by the small plants in these towns is \$200 to \$400 per horse-power per year, the opportunity to purchase cheap power would be a great benefit. Other immediate uses would be pumping water for rice irrigation, and for the operation of cotton gins. As the country develops the power can be used for operating electric railways and factories. In general it may be said that the possession of a large supply of cheap power would put this district into the favorable position which is always held by communities having this resource.

The commercial eminence of Massachusetts has resulted from the development of her water-powers. Yet there is only one river in that State with as large drainage area as that here considered; the rainfall is nearly 50 per cent. less; the flow is more irregular, due to the passing off of most of the winter snow in a few weeks of spring flood, and such unusual opportunities for regulating flow as would result from the construction of the St. Francis reservoir do not exist. In fact, the power plant at the lower end of the St. Francis floodway would probably be superior to any plant in Massachusetts.

Two or three years would probably be required to bring this project to a paying basis, as a market for the power would have to be secured. In the long run the income should go far toward paying the interest on the cost of the entire floodway system. The amount of power available could be approximately doubled by strengthening the reservoir system and installing an auxiliary steam plant for use during periods of exceptional drouth. Should local markets for the power develop so as to make this further increase desirable, the profits under a good management should be sufficient to pay interest and sinking fund and all cost of maintenance on the floodway system. It probably will be necessary to install an auxiliary steam plant to furnish power during brief flood periods when there would be little head on account of high water in the St. Francis River, and this plant would increase the minimum amount of power to be furnished during extreme dry periods.

The two advantages of the development of this water-power would be, first, the financial returns which would lighten the burden of the drainage development, and second, the stimulus to industrial development in the community which would result from cheap power. The plant should remain the property of the district, and the power used, as far as possible, in supplying the local needs of the district for light and power.

The vigorous campaign now being made for a system of internal waterways is familiar to everyone. Against this movement stands the fact that despite the im-

provement of our rivers and canals, their use continues to decline from year to year, and it still remains to be seen whether canal transportation will ever again compete to an important degree with transportation by rail. Yet, in the opinion of many students of the subject, water transportation must be a very important factor in the full development of our country. This being the present status of the subject, it would not be wise to spend a large amount of money in making water transportation possible in the proposed district until it is fully proved that such a course would be profitable, while, on the other hand, to destroy the possibility of internal waterway development in devising a system of drainage would be doubly unwise. An improvement of this district at the present time should not include large expenditures for waterways, but should with great care conserve to the future every possibility for this development, and this is the course which has been pursued in the preparation of these plans.

Some of our foremost engineers, in considering methods of securing a transportation channel through the Mississippi Valley, have come to the conclusion that this result may best be accomplished by leaving the Mississippi River channel and by constructing a slack-water channel in the lower part of the valley away from the river. The floodway channel of this project, in connection with the floodway planned as a part of the Little River District in Missouri, would furnish a right of way for such a transportation channel from a point near Cape Girardeau to the St. Francis River near Parkin, a distance of more than 150 miles in a straight line. The reservoirs planned on these two projects would furnish a sufficient supply of water for such a channel, and the construction of a transportation canal inside the floodway levees would not in any way interfere with the drainage of the country.

In both first cost and maintenance the construction of such a channel for 14-foot navigation would probably be far cheaper than the improvement of the Mississippi. It might be continued down the St. Francis River to its mouth, and there crossing the Mississippi River, be extended through the Yazoo Valley, entering the Mississippi River again at Vicksburg.

The effect of the construction proposed in this report would be to improve the condition for navigation of all of the drainage channels of the district except the left-hand chute of Little River and the St. Francis River between Marked Tree and Parkin. The ditches outside the floodways will carry water of sufficient depth for any boats which now operate the rivers. The Tyronza River and the right-hand chute of Little River will be improved so as to carry much larger boats than they will at present. The right-hand chute of Little River, with the continuing ditch down the outside of the St. Francis reservoir, will form a better transportation channel than the left-hand chute ever has been. The St. Francis Reservoir and ditch No. 12 would be navigable for boats of a five-foot draft at any time of the year as far upstream as Lake City.

At a cost of \$50,000 to \$75,000, in addition to that required for the proposed power plant, a transportation channel with a minimum depth of water during dry seasons of five feet and a minimum width of 30 feet can be made throughout the entire floodway and reservoir system. This channel would be secured by constructing across the floodway dams about five feet high, supplied with locks, and by excavating between the dams a channel having a minimum depth of water of five feet during low water. These dams would raise the water level at flood flow less than six inches, ac-

cording to Marriman's formula for the flow of water over submerged weirs.

In compliance with the river and harbor act of June 3, 1896, a survey of the lower St. Francis river was made under direction of the chief of engineers of the United States Army to determine the practicability of making the lower part of that river navigable. In that report the cost of obtaining three-foot navigation to Wittsburg in time of low water is placed at about \$1,000,000, and the recommendation is made that the project is not feasible at the present time. When it is considered that this is the largest part of the St. Francis channel, and was looked upon as the only part concerning which there was any prospect of improvement to gain a navigable depth of three feet, it is seen that the upper St. Francis River is in effect not a navigable stream, and cannot be made such at any reasonable expense.

The proposed St. Francis reservoir, if combined with a power plant, would regulate the flow of that stream by making the low-water discharge about three times what it is at present, and probably would result in greater benefit than the expenditure of \$1,000,000 in improving the lower river. By the moderation of floods in the reservoir the formation of sand bars would be less rapid and the higher low-water stage would tend to hold a deeper channel.

The St. Francis River above the mouth of Big Bay should be declared by act of Congress to be not navigable, and the drainage improvement of the region should be allowed to progress without hindrance. At present even small gasoline boats cannot travel on the river from Marked Tree to Parkin during several months in the year. With the construction of the proposed drainage system the ditches outside the floodways will form better drainage channels than the river does at present, while in the floodway itself is the possibility of developing a valuable transportation system.

In estimating profits from the execution of the proposed work separate consideration may be given to agricultural lands, timber lands, lands held for investment and speculation, railroads and towns and cities.

The profit of drainage to owners of agricultural lands varies with the conditions of the land before drainage, the thoroughness of drainage, the fertility of the soil and the access to markets. Not more than 5 per cent. of the land in this district has sufficient surface drainage, and much of that small fraction needs tilling. The greater part is worthless for crop production in its present condition, and this would receive practically its entire agricultural value from drainage. On a large part of the land now cultivated crops are frequently lost as a result of an excess of water, and yields are often but a fraction of what could be secured with thorough drainage. On other lands where crops are usually secured the yield could be largely increased by this improvement. The great fertility of the soil and the easy access to markets will give this land a market value of \$150 or more an acre when fully developed for agricultural purposes.

Lands held for investment and speculation will derive much of their value from this improvement. Probably between 5,000,000 and 10,000,000 acres of land are being reclaimed in the United States by drainage and irrigation. That region will be most attractive to intelligent investors which gives the surest evidence of thorough development in the immediate future. The experienced farmer with capital knows that his interest lies in paying a higher price for land which is capable of immediate development, and from which he can at once get returns on his investment, rather than in purchasing land the cultivation of which

may be unprofitable for many years to come.

In this regard it is pertinent to inquire whether the interests of large holders of timber lands lies in developing the main drainage system now, or in delaying it until practically all the timber is removed. If the main drainage system is carried through at this time the lateral drains will be constructed as fast as they are needed. Very many tracts will at once be improved and made into productive farms, furnishing an object-lesson of the remarkable productiveness of the soil. Roads, homes and schoolhouses will follow, with the result that as the timber lands are cut over they can at once be sold to persons from Illinois, Indiana and Iowa, who are willing to pay good prices for productive land in communities well on the way to industrial development. If, on the other hand, drainage is postponed until the timber is largely removed, agricultural development will begin in a country without roads, bridges, schools or other improvements, and without the high reputation over the country for productiveness which will follow the thorough development of a part of the area. This development, too, will take place in competition with that of millions of acres of other land throughout the country where a progressive policy is being pursued, where development will be well advanced, and where settlers on productive farms are acting as potent publicity agents. A few years' precedence in development when many large areas over the country are being reclaimed may have an important effect upon real estate values.

Every town and city in the district obviously will be benefited by the agricultural development. The district comprises about 20 per cent. of the territory which is most directly tributary to Memphis, and its development will result in a corresponding increase in the business of that city. Jonesboro, on the west, will also be largely benefited, as it has excellent railroad facilities and is more directly in communication with about half the district than is Memphis.

### Water Supply of Eastern Virginia.

[Special Cor. Manufacturers Record.]

Oceana, Princess Anne Co., Va., Sept. 29.

Eastern, or "Tidewater," Virginia has no water-power, unless we consider a few mills run by the tidal force. A few such odd relics may be seen here and there on the arms and inlets of the sea. In such cases or such mills a point is selected where, for natural causes or reasons, the tide is steady and strong, and the "under-shot" wheel is so arranged as to be changed to "catch the tide, both going and coming," in that special feature closely resembling the political economist of the present age. Such wheels, propelled by such power, move with great dignity and such slowness of motion as to make them more objects of curiosity than practical usefulness.

Water for domestic purposes, as well as for industrial use, is secured from wells. These wells are for domestic purposes rather shallow, ranging from 12 to 50 feet in depth, depending upon locality.

For industrial purposes, such as needed for the boilers, for the generation of steam, deeper wells are bored, and larger supply of water is secured than from the more shallow wells. The cities and business centers are largely supplied with water from surface lakes or ponds; in some instances the tidal waters are dammed out and the fresh water dammed in. The water therefore ranges from good to bad or indifferent. As water is conceded to be the medium for the development of serious diseases, it becomes a vital and important topic to be carefully studied, weighed and considered. The topography and geological formation of Tidewater Virginia both

favor the "artesian" or flowing well. The basis upon which Eastern Virginia rests is the "granite" rock. Of course, "granite" is the base rock everywhere, but in some places the base rock has been upheaved by internal forces until it appears at the surface. In other places it remains where it was formed by fire at the bottom or underneath. At Richmond and Fredericksburg, 100 miles from the sea, the granite appears at the surface. At Norfolk and Newport News the granite is nearly 2500 feet under many strata of sand, clay, marl and other ingredients or combinations of soil. The slope, therefore, of all the strata is toward the sea. Water penetrating the soil anywhere between the seashore and the granite outcrop naturally percolates through the strata of sand and gravel downward toward the coast. Wherever such strata is penetrated or perforated by the well augur the water naturally rises to the surface, and in many cases rises quite well above the surface. The water supply, therefore, for the future for Tidewater Virginia must be supplied by the "artesian" well. The Government has a record of more than 350 "artesian" wells in the territory under consideration. It is a very interesting feature to study the "strata" penetrated by these wells. I herewith submit a sample. This is a well at Homewood, on Hog Island, in the James River, a few miles from Williamsburg, and just across the river from Jamestown. The well is 290 feet deep. The strata is named below:

Clay and loam, 15 feet.  
Gravel, 10 feet.  
Clay, 60 feet.  
Marl, 135 feet.  
Rock, 2 feet.  
Blue clay, 67 feet.  
Hard Rock, 3 feet.

At the depth of 290 feet water bearing black sand was struck, and a plentiful supply of good water was found, with a flow of 30 gallons a minute. There are five wells on the island, ranging from 112 to 317 feet deep, and in the deeper wells the temperature is recorded at 54 degrees. That 135 feet of marl deposit or strata is a wonderful page of the history of this old world of ours.

It is a truly interesting study to examine the strata of old mother earth, where the deep borings have turned the pages one after another, and consider the manner in which these strata were formed and the length of time required. No wonder that the geologist as well as the astronomer stands uncovered in the presence of such evidence of the power, wisdom and goodness of the Creator of the heavens and the earth. The deepest well in Eastern Virginia is at Fortress Monroe, 2254 feet, the last eight feet in solid granite. It is a fertile field for speculation as to the probable results if Uncle Sam or some other investigator should succeed in drilling through the solid granite shell that enveloped the bowels of mother earth, that separates the solid land from the molten interior. That is an unsettled, unsolved and unsolvable question; but the question of an ample supply of pure, healthful water for Tidewater Virginia is already solved, and a good article is within reach of every enterprise and every home. A JEFFERS.

J. F. Bashara and C. W. Elrod, representing the United Land & Development Co. of Dallas, Tex., have established offices at New Orleans and are planning the organization of a company to build a mill for manufacturing artificial silk from the zapupe fiber plant of Mexico.

Secretary J. R. Babcock of the Chamber of Commerce of Dallas, Tex., reviews in *The American City* the campaign for a city plan in Dallas.



**THE COTTON GUARANTEE.****How It May Be Made a Burden on the Grower.**

[Special Cor. Manufacturers Record.]  
New York, October 18.

With the status quo extended to December 31 in the matter of the British demand for guaranteed bills of lading on American cotton, there will be opportunity for a much more exhaustive discussion of the whole matter than has been possible up to the present time. That the demands of the British bankers for a guarantee and the refusal of the Americans to meet the demands has never been a case of an irresistible force meeting an immovable body has been the opinion of many capable people here from the beginning of the controversy. The views of the Americans may be generally epitomized in the statement:

"The English spinners will have to have American cotton. All our Southern people need to do is to sit tight and wait till the Englishmen come to their terms."

There is nowhere any serious fear that the entire question will not be settled in due time, and without especial embarrassment or friction. It is a matter of such tremendous importance—the unhampered marketing of the American cotton crop—that many are of the opinion that no matter of detail can be interposed to materially interfere with the orderly transaction of the cotton business.

Southern cotton men doing business on the New York Cotton Exchange unreservedly uphold the South in its refusal to have anything to do with the plan to have a guarantee company insure bills of lading for a fee. Mr. Frank B. Hayne, who has recently returned from a trip to England, said to me:

"It is an outrage to ask that the South be assessed something like a million dollars to pay for guaranteeing cotton bills of lading. It is altogether fallacious to claim that the consumer would pay the fee. It will come out of the producer, without question. The only guarantee that ought ever to be given is the guarantee of the personal honor and integrity of the individual. It is rather late in the day for me, for instance, to be called on to pay a fee for putting the dishonest man on the same footing with one who has responsibility and standing. I think the railroads should be willing to stand behind the acts of their agents, just as every other principal is bound by the act of an agent when he is authorized to commit that act. In any event, the matter will not be settled by a guarantee company."

Mr. W. P. Brown said:

"I consider it outrageous for foreign bankers to ask for a guarantee as to the validity of cotton bills of lading. The penitentiary is the place for all forgers, and as a matter of fact I believe careful investigation will show that there are more bankers in the penitentiary than there are cotton men. Cotton shippers, as a rule, are composed of a good class of people, and the loss from year to year on account of forged bills of lading amounts to almost nothing. It is, therefore, an unjust reflection on the American cotton shipper to ask that bills of lading should be guaranteed, when the present situation has been brought about by the rascally deeds of two or three individuals."

Mr. Atwood Violet said:

"In my opinion, this whole cotton bill of lading question is a good deal of 'a tempest in a teapot,' because the substantial exporting firms in the South, or spot buyers selling to domestic or foreign spinners will have no difficulty in securing acceptance of their offers, either to domestic or foreign spinners or merchants, and firms of that character are sufficiently numerous to take care of the crop in the manner stated. The small-fry spot people,

or those financially irresponsible, will be eliminated, and properly so. The Southern planter or merchant or banker will never consent to pay a brokerage per bale to a guarantee company, or to anybody else, in order to sell their cotton, and the sentiment of many of the prominent exchanges in the South, as recently announced in the daily press, confirms this impression, I think, entirely."

ALBERT PHENIX.

**TO SPEND \$250,000 AT ONCE.****Additional Big Developments at Texas City to Begin.**

[Special Dispatch to Manufacturers Record.]  
Texas City, Tex., October 17.

The Texas City Transportation Co. directors, who have been in session here, authorized the purchase of two switch engines, 20 flat cars and two coaches, and also the construction of five miles of additional yard track. In addition to this railroad work authorized, they ordered the building of another fireproof warehouse 750 feet long by 100 feet wide, and the installation of another 500-kilowatt electric generator, a new depot building and a new office building at the docks.

All of this work is in addition to previous construction heretofore given in detail in the MANUFACTURERS RECORD, which has been finished. These additional facilities will cost \$250,000, and will begin the expenditure of another million dollars in terminal facilities to be invested here during the next 12 months. H. B. MOORE.

**Zinc in Tennessee.**

Mr. Samuel W. Osgood of Knoxville has prepared for the Tennessee Geological Survey, George H. Ashley, State Geologist, a bulletin dealing with zinc mining in Tennessee. The paper, which is illustrated and has less than 20 pages, after referring briefly to the character and geology of the ore, discusses the history of zinc mining in Tennessee, and points out the causes of past failures. Then it describes recent experimental developments on a much larger scale than had heretofore been attempted, with results that lead Mr. Osgood to believe that the profitable development of the ores has been demonstrated. The ore is of a low grade, though higher than the Joplin (Mo.) ore, and Mr. Osgood believes that the key to the situation is simply the working of the deposits on a large enough scale to permit of the use of labor-saving machinery, so as to reduce the per ton cost of mining and milling the ore, and he gives the figures upon which his conclusions are based. He also gives figures to show that the smelting of Tennessee ores in Tennessee should prove a very profitable business when properly carried on.

Mr. Charles E. Falconer of Baltimore was elected last week president of the National Association of Stationers and Manufacturers, with Henry C. Yeiser of Cincinnati, George M. Courts of Galveston and Robert D. Patterson of St. Louis, vice-presidents; Mortimer W. Byers of New York, secretary; Charles A. Lent of New York, treasurer, and George G. Damon of Boston, auditor.

The Georgia Fruit Exchange has elected Messrs. I. F. Murph, Marshallville, president; P. J. A. Berckmans, Augusta, vice-president; Robert F. Maddox, Atlanta, treasurer, and I. M. Fleming, Atlanta, manager and secretary.

It is reported that the Abingdon Mills of Huntsville, Ala., will add new spindles. This company now has 17,500 ring spindles, 508 looms, etc.

It is reported that Benton Batt of Morgan county, West Virginia, netted this year \$2000 for apples grown on six acres of land.

**WHAT IS YOUR TOWN DOING?**

The MANUFACTURERS RECORD will be glad to receive from responsible correspondents in every town in the South brief items of news about business conditions and the opportunities for industrial enterprises. This information is desired for publication without cost of any kind to the sender, and regardless of whether the writer of the letter is a subscriber or not. The MANUFACTURERS RECORD accepts no paid town write-ups. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South.

This department is open only to news facts of interest to investors and homeseekers. Communications of 200 or 300 words are likely to be given prompter publicity than more extended ones.

**A MUNICIPAL ABATTOIR.**

Executive Office,

Paris, Tex., October 10.

Editor Manufacturers Record:

An innovation in municipal ownership is upon trial in Paris. It is a combined abattoir, cold-storage and reduction plant. The cost of installation was \$10,000, and its ultimate success is already practically assured. After an earnest but unsuccessful effort to induce the local meat cutters to undertake the enterprise as a joint stock company or corporation, the City Council finally determined to go forward with it as a municipal plant.

The structure was erected upon a plat

is thereby completely and perfectly protected from flies, dust or other contamination until it is placed in the meat-cutter's refrigerator.

The contrast between the results thus obtained and the conditions formerly endured by a patient public are striking indeed. The ordinary private slaughter pen is a perfect cesspool of filth. It is cheaply constructed, rarely ever screened, the water supply is usually a pool to which both hogs and cattle have access, hogs are kept for scavengers, and the offal are devoured by them adjacent to the killing-room, while during the summer months flies abound by the millions and breed in



MUNICIPAL ABATTOIR AND REDUCTION PLANT, PARIS, TEX.

of ground of two acres. The killing-room, or abattoir proper, is two stories high, well lighted, carefully screened, has a concrete floor laid to a perfect grade and well equipped with bell traps and sewer connections. In addition to these there is an ample supply of overhead steel tracks and trolleys, together with a scalding vat, and such other equipments as would naturally belong to a room where slaughtering is done.

Immediately adjacent to this, and separated by a drop door, is the knock-down pen, which is itself connected with the stock pens by elevated runway. The cattle are killed in the knock-down pen, but the bleeding, the removal of the hide and viscera all takes place in what is commonly called the killing-room. The anti-mortem inspection takes place in the stock pens immediately before slaughtering, and the post-mortem inspection takes place in the killing-room, where the viscera, and, indeed, all portions of the carcass, undergo the closest scrutiny by a graduate veterinarian, who is also a trained inspector. Each carcass, after having undergone final inspection and has received stamps and tags, is rolled into the chill-room, which is maintained at a temperature of about 40 degrees. Here it remains for 12 hours, that all animal heat may be removed when it passes into the refrigerating-room proper, to remain until called for by the meat cutter. When the carcass is called for it is rolled into the loading-room and completely enveloped in a clean white cloth bag, is placed in an enclosed delivery wagon specially built for the purpose, and

the dung heaps and the entire premises smell to heaven.

How can anything wholesome or fit for food come from amid such surroundings. And yet this is not an overdrawn picture; it exists in every small town and many large cities.

The Paris abattoir was constructed and equipped, and is now operated by the city to meet this "long-felt want." It is being done successfully, and the best of it all is that no one is hurt and all are benefited.

The meat cutter secures service which is far more satisfactory than if he did his own slaughtering, and at prices, too, decidedly more economical, while the public can eat meat and meat products with the full assurance that all precautions dictated by recent research or modern sanitation have been fully complied with.

There are many other features of this intensely practical plant that deserve more than passing notice.

The entire scheme is, indeed, so flexible that it can readily be adapted to the requirements of the smallest town or the largest city. ED. H. McCUISTON,

Mayor.

**A TOBACCO CENTER.**

Commercial Club,

Cadiz, Ky., October 10.

Editor Manufacturers Record:

Cadiz is getting a hustle on. It has recently put in a very fine system of water-works, put down concrete sidewalks on all principal streets, has just voted substantial bond issue for school purposes, and will begin at once to erect a handsome

graded school building in connection with old ones. The City Council has ordered an electric-light franchise sold. The investment will pay well. This is about the only modern improvement in which Cadiz is lacking.

Several new tobacco factories will be in operation another year. We are in the heart of the dark tobacco district of Kentucky and Tennessee. The American Snuff Co. will open up a large factory here next year, as will several other large concerns, besides the usual number of local buyers and rehandlers. The Planters' Protective Association will have a large rehandling, storage and sales house here. We need several cigar, plug tobacco, smoking tobacco and snuff factories here. Local capital would be glad to assist in promoting several of this kind. This county is wide-awake on the good-roads proposition, and is now building several miles of gravel roadway, and will continue until every road in the county is graveled. The White & Dixon Company, operators of the famous hematite coal-blast furnace, is working overtime to supply the demand for its output. The old "Hillman" cold-blast furnace, which has been lying idle for some years, is being examined by an Eastern capitalist with a view to resuming operation. An inexhaustible supply of fire-clay here needs outside capital to develop it.

A. C. BURNETT,  
Secretary.

#### SAN BENITO NEEDS.

Commercial Club,  
San Benito, Tex., October 16.

*Editor Manufacturers Record:*

This town of 2500 people, only two years old, and growing fast, has a Commercial Club just organized, with \$5500 available for club work.

We need another cotton gin, as we ginned 2000 bales this year, and there will be double that amount next year. We now have a standard-gauge interurban building over the surrounding country, and no farm will be more than one and a half miles from the track. We will ship this year 2000 carloads of winter cabbage, besides other truck, and need a 40-ton ice plant to be in operation by January 1, 1911. We have 5400 acres in sugar-cane, and need a sugar mill. We raised 900 acres in broom corn, which can be pulled three times a year from the one planting. We need a broom factory.

This section presents opportunities greater than any place I know of, and I am familiar with all sections west of the Mississippi River.

J. A. GRAHAM,  
Secretary.

#### POWER AT LITTLE ROCK.

Board of Trade,  
Little Rock, Ark., October 17.

*Editor Manufacturers Record:*

An investigation in this city conducted under the auspices of the Board of Trade shows the cost for developing a horse-power at the present price of coal per ton in this city, \$2.75, is \$19.50 for 300 days of 10 hours per day. Cost is .005 per hour for coal, .001 per hour for labor, or labor 10 hours per day. Cost is .0055 per hour rated at evaporating 8 pounds of water per pound of coal, taking 32 pounds of water per horse-power.

GEO. R. BROWN,  
Secretary.

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages 100 to 110, and under "Cities, Towns and Railroads Inviting Factories" on pages 120, 127, 128 and 129.

## GOOD ROADS

### WEEK'S HIGHWAY RECORD.

#### Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

#### Bonds Voted.

Bellville, Tex.—Austin County Precinct No. 1 voted \$25,000 bond issue for road construction.

Rising Star, Tex.—City voted \$100,000 bond issue for street improvements.

#### Bonds to Be Voted.

Anson, Tex.—Jones county will vote on \$125,000 bond issue for road improvements.

Front Royal, Va.—Warren county votes November 8 on \$30,000 bond issue for road construction in Front Royal district.

Jonesville, Va.—Lee county votes November 29 on \$350,000 bond issue for road construction.

Haskell, Tex.—Haskell county votes November 8 on issuing \$100,000 of bonds for road construction.

Mobile, Ala.—Mobile county will vote on \$500,000 bond issue for road construction.

Victoria, Tex.—Victoria county is considering issuance of from \$300,000 to \$500,000 of bonds for road construction.

Wise, Va.—Wise county votes November 28 on \$700,000 bond issue for road construction.

#### Contracts Awarded.

Alexandria, La.—City awarded contract for 5800 yards of bitulithic pavement, 6700 yards of brick pavement, all on five-inch concrete base; 16,000 yards of gravel pavement, 16,000 linear feet of curb and gutter; total cost \$60,000.

Lexington, Va.—City awarded contract for construction of tar-macadam streets.

Lexington, Ky.—City awarded contract for construction of concrete sidewalks, curbing and guttering on certain section of College View avenue.

Pulaski, Va.—State Highway Commission awarded contract for two miles of Dora road.

Wheeling, W. Va.—City awarded contracts for sidewalks, curbing and paving along streets leading to main entrance of Bethany College.

#### Contracts to Be Awarded.

Crowley, La.—City opens bids November 28 for constructing 33,000 square feet of concrete street crossings.

Easton, Md.—City plans \$65,000 expenditure for street paving and sewer system.

Galveston, Tex.—City opened bids October 20 for relaying brick pavement on certain section of Tremont street.

Greenville, Tex.—City opened bids October 18 for 335 feet of concrete sidewalks on three streets.

Lexington, Ky.—City recommended award of contract for macadam streets, concrete curbing and guttering on eight avenues.

Little Rock, Ark.—City adopted ordinance appropriating \$13,500 for paving intersections of all streets crossing certain sections of West 23d street; also \$21,000 for paving streets and constructing storm sewers.

Miami, Fla.—City will expend \$100,000 for improvements, including paving.

Nashville, Tenn.—Road Board receives bids until October 29 to grade road 6226 feet long from Lickton to Wilkerson road.

New Orleans, La.—Louisiana Railway & Navigation Co. will construct one block of pavement 280 feet long and 30 feet wide.

Palatka, Fla.—City will pave several principal lateral streets in business sec-

tion with vitrified brick and granite curbing or concrete curb and gutter.

Parkersburg, W. Va.—City receives bids until October 27 for paving Market street.

Portsmouth, Va.—City receives bids until October 31 for 71,350 square yards pavement, 32,544 linear feet of all-granite curb, or 28,196 linear feet to be concrete combined curb and gutter and 4348 linear feet to be concrete curb.

Rogersville, Tenn.—Hawkins county opened bids October 17 for 10,000 cubic yards of macadam roadway.

Tulsa, Okla.—City prepared plans and specifications for 7 to 10 miles of cement sidewalks; estimated cost, \$20,000 to \$25,000.

Vicksburg, Miss.—Warren county receives bids until November 7 for widening and grading Pender Hill.

#### Faith Shown by Works.

C. L. Pearce, county judge, writing from Batesville, Ark., regarding the work of road improvement in that section, says that what has recently been done was by voluntary contributions, and to this he adds:

"We had a good-roads day set apart for everybody to do some work on this road without pay, the county furnishing tools, tilings, cement, etc. In this way we procured something like \$1000 worth of funds and labor, and the county was out almost nothing. We put 18 miles of road in good condition in this way."

#### Alabama.

The Alabama Good Roads Association elected last week Messrs. John Craft of Mobile, president; John W. O'Neill of Birmingham, H. K. Milner of Washington county, M. B. Wellborn of Sumter and N. J. Griel of Montgomery, vice-presidents, and J. A. Rountree of Birmingham, secretary-treasurer.

## FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

#### Copper, Tinplates, Etc.

I. Setton & Co., P. O. Box 888, Cairo, Egypt, write the MANUFACTURERS RECORD:

"The articles which interest us the most are the following: Corn flour, tinplates, starch, copper, sewing cotton and confectionery. Should you be so kind as to recommend us to manufacturers in these lines we shall esteem it a good favor."

#### Wants Electric Lamps.

C. C. MacKee Company, Hongkong, China, writes the MANUFACTURERS RECORD:

"We are interested to have prices quoted us on large quantity lots of carbon filament and metallic filament (Osram type or any like filament lamp), incandescent lamps or bulbs—10, 16, 25, 32, 50 and 100 candle-power. We want catalogues and correspondence only containing prices and discounts, and if possible samples, which will help secure the trade."

W. C. Barrickman has resigned his position as secretary of the Wichita Falls Chamber of Commerce and has accepted a position with the Texas Commercial Secretaries' Association in Fort Worth, to have charge of the office at the headquarters and to edit the *Commercial Secretary*.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### BIG YEAR ON THE B. & O.

Many Improvements in Progress to Care for the Heavy Growth of Business.

The Baltimore & Ohio Railroad Co. has issued its eighty-fourth annual report, which covers the fiscal year ended June 30, 1910. The operated mileage was 4434 miles. Gross earnings were \$88,901,952, increase as compared with 1909, \$12,488,396; total expenses \$61,333,800, increase \$10,169,819; net earnings from operation \$27,567,451, increase \$2,318,576; percentage of expenses to earnings 68.99, increase 2.03 per cent. There having been a deficit of \$599,633 on outside operations, the total net revenue was \$26,967,817, increase \$2,258,191; operating income after the payment of taxes \$24,497,853, increase \$2,059,843; gross income \$28,715,751, increase \$2,930,444; net corporate income after the payment of interest on the funded debt, rentals, etc., \$16,247,587, increase \$2,511,581. After a deduction of \$415,760 expended for additions and betterments during the year there was left a balance of \$15,831,826, increase \$2,645,392. Out of this balance there were paid dividends amounting to 4 per cent. on the preferred stock and 6 per cent. on the common stock, which left a balance of \$4,357,612 to be carried to the credit of profit and loss, making the total amount to the credit of that account \$23,377,100.

Concerning the construction and improvement work of the company, the report says that on the Cumberland division there is now being built a third track for about 5 miles, with automatic block signals, which will make a total stretch of 34 miles, this improvement being made necessary by the growing density of traffic. The third track on the 17-mile grade is also being extended to facilitate the movement of freight trains. On the mountain west of Terra Alta, W. Va., to Rodemer, about four miles, the third track is being extended, and two tunnels are being taken out. This will complete a third track between Terra Alta and Rowlesburg, to be used by freight trains. There is also under way a change of line and reduction of grade in connection with the building of the new double-track tunnel at Tunnelton, W. Va. This will amount to about four miles of new line, including the tunnel, which is 4250 feet long. The old tunnel will continue to be operated, thus giving three tracks. Another tunnel will be taken out by the building of third track for a distance of six miles between West End and Hardman, which will permit the use of Mallet compound engines that could not be operated through Murray tunnel.

On the Pittsburg division some similar improvements are in progress, including the extension of third track in the vicinity of Sand Patch tunnel, the crossing of the Alleghenies, to improve the movement of trains. By the construction of second track in an open cut, including the elimination of single track through a tunnel at Bakerstown, Pa., second track will be made continuous from Sand Patch, Pa., to Hamler, O., on the Chicago division. Second track is also being built for 21 miles on the latter division, and when it is completed there will remain only 86 miles of single track on this part of the road. Other improvement work of similar character is under way on the Somerset & Cambria branch, and the Quemahoning branch is being extended to Somerset.

It is noted that the new double-track bridge over the Susquehanna River was completed and put in use; also that progress was made on the general plan to re-



new and strengthen certain bridges to carry the heaviest locomotives. Those on the line from Philadelphia to Grafton and also on the Pittsburg and Chicago divisions will be completed by the end of this year, and the rest will be done as soon as possible.

It is further noted that construction is begun on the elimination of grade crossings in Baltimore, Chicago and Columbus. The work at Columbus will be finished during the current fiscal year, and the other work will require several years for completion.

"Much of the country dependent as yet upon your lines for transportation," states President Willard, "is rich in natural resources, and there is every indication that the already large industrial development will be greatly extended. Aside from the possibilities referred to, it became evident during the year that in order to handle satisfactorily the business already offering it was essential to make immediate provision for additional equipment and other facilities. To meet this situation your board authorized the purchase of 284 locomotives and 15,000 freight cars, the approximate cost of which is \$23,000,000, and various improvements, the expenditures for which, estimated at about \$20,000,000, will extend over 18 to 24 months. To better care for the increasing passenger traffic, authority was given for the purchase of 26 locomotives and 70 pieces of passenger train equipment of modern design and equipped for electric lighting, which system of lighting has now been introduced on through trains."

During the year there were added to equipment 166 locomotives, 7023 freight cars, 44 passenger cars and two work cars, costing very nearly \$9,000,000. The total value of all equipment as appraised is nearly \$72,000,000.

By the completion of negotiations the company secured its own entrance into Chicago and the facilities which it has used under a lease for a number of years. The ownership is in the name of the Baltimore & Ohio Chicago Terminal Railroad Co., all the stock of which is owned by the Baltimore & Ohio Railroad Co. This covers the Chicago Terminal Transfer Railroad Co.'s property, including about 101 miles of railway lines, of which 84 miles are owned and the rest are held under a permanent lease.

The percentage of freight earnings of total earnings was 78.07, and of the commodities carried the largest increase was that of bituminous coal—4,250,000 tons. Coke tonnage increased 1,000,000, and that of ores 1,250,000. The tonnage of castings and machinery increased 1,350,000, that of iron, pig and bloom, nearly 600,000 tons, but steel rails fell off a bit—between 5000 and 6000 tons. The tonnage of stone, sand and like articles increased over three-quarters of a million, cement, brick and lime increasing 350,000 tons, petroleum and other oils 250,000.

#### EXTENSIVE COAL PLANS.

**New York Central, Backed by Morgan, Said to Have Great Aims to Attain.**

Some interesting rumors are afloat in Wall Street concerning the New York Central system and an alleged plan which the Morgan interests are credited with having under consideration for its development. The stories circulated amount to this:

Purchase of the Wabash Terminal in Pittsburg, control of the Wheeling & Lake Erie, joint control of the Western Maryland with the Rockefeller interests, purchase of the Virginian Railway through the Lake Shore Railway, investment of \$20,000,000 by a syndicate in West Virginia and Pennsylvania coal lands, the

fuel to be shipped via Baltimore to Mediterranean ports, vessels returning with iron ore from Spain.

Concerning this rumored plan, it is said that it would firmly establish the New York Central in the Pittsburg district, besides securing for it a bigger share of the tonnage at that point and another outlet to the Lakes. Also enormous traffic possibilities will come through the junction with the Western Maryland. It is further intimated that a line 70 miles long may be built from Durbin, W. Va., on the Western Maryland, to Deepwater, W. Va., the western terminus of the Virginian Railway. Control of the latter would also give access to great coal fields in Virginia and West Virginia, and it is alleged, as to the Western Maryland, that the line from the Great Lakes to Baltimore would be 140 miles shorter than to New York.

As is well known, the Western Maryland is already building an extension of 83 miles from Cumberland, which will connect with the New York Central system at Connellsville, Pa., and as to the Virginian Railway, dispatches from Norfolk say that negotiations are already on between it and the New York Central for an interchange of business via the Kanawha & Michigan Railway, in which latter road the New York Central recently bought an interest.

#### BIG DEAL AT AUGUSTA.

**Electric Railways, Hotel and Other Assets Bought by Redmond & Co.**

It is announced from Augusta, Ga., and New York city that ownership of the Augusta Railway & Electric Co. and of the electric railway from Augusta to Aiken, S. C., has changed, the properties having been sold by the Harriman estate to Redmond & Co., bankers, New York. A dispatch from New York says that C. C. Tegethoff, president, has resigned, and that F. Q. Brown of Redmond & Co. was elected in his place. It is not known whether the purchasers have bought the properties on their own account or are representing other interests. An option was given early in the summer. Large improvements and extensions are said to be contemplated. James U. Jackson is vice-president and general manager.

The properties consist of about 30 miles of track in Augusta and its suburbs, and about 22 miles from Augusta, Ga., to Aiken, S. C., including buildings and equipment. Among the structures is the Hampton Terrace Hotel, besides the property of the North Augusta Land Co., water-power rights at the Saluda River and other assets. It is rumored that Redmond & Co. represent J. G. White & Co., owners and builders of electric railway properties, and that the deal is part of the plan for a contemplated electric railway from Atlanta via Augusta to Columbia.

#### NEW COAL LINE BEGINS.

**Louisville & Nashville Now Has Two Mineral Extensions in Kentucky.**

The Lexington & Eastern Railroad has awarded contract for an extension of 80 miles from Jackson to Whitesburg, Ky., following the North Fork of the Kentucky River. The work is divided into five sections of 16 miles each, which have been let to contractors as follows: Lane Bros. of Baltimore, Md.; Mason, Hanger & Co. of Frankfort, Ky.; Jones Bros. of Columbus, O.; W. J. Oliver of Knoxville, Tenn., and the Luck Construction Co. of Roanoke, Va. There will be nine tunnels on the route, which lies through rough country in the mountains, but it is to be completed in a year. John Marston, Jr., Lexington, Ky., is chief engineer of the railroad, which is now one of the Louisville & Nashville lines.

This line, like the Wasioto & Black Mountain Railroad, which is also being built from a connection with the Louis-

ville & Nashville, will open up a rich mineral region, and in the course of time the two extensions may be connected, as the Wasioto & Black Mountain road is extending up along the watercourses on the other side of the Pine Mountain, and if continued 30 miles beyond Harlan would reach a point not far from Whitesburg.

#### NORFOLK & WESTERN WORK.

**Stockholders Authorize Large Issue of Stock and Bonds for Improvements.**

The stockholders of the Norfolk & Western Railway Co. at their recent meeting at Roanoke, Va., approved the proposition to issue \$50,000,000 additional of common stock and to issue from time to time, in such amounts as may be necessary, a total of \$50,000,000 of bonds convertible into common stock. This financing is for the purpose of enabling the company to pursue its improvement plans from time to time and thus make provision for its steadily-growing business. This work includes a continuation of double-tracking, revision of line and some extensions.

#### The Railroad to Key West.

The latest information from Key West concerning the building of the extension of the Florida East Coast Railway says that the construction forces are pushing their work energetically, 200 men and equipment having arrived at Big Pine Key, while forces are also at work on Sugar Loaf Key and Saddle Bunch Key, these being recently-established camps on the extension. The engineers are now completing plans for the Key West terminals, and it is anticipated that forces will be put to work on them beginning with November. All the arch work from Key West to Boca Chica is expected to be finished by that time. In addition to the points before mentioned, construction forces are also engaged at Big Cippiat and Rockland Keys. All the water work between Key West and Pait Channel is small, and can be rapidly constructed. At the latter point a viaduct is under construction.

At the Moser Channel Viaduct there are now 148 piers completed out of a total of 172, while 15 more are under construction. With the continuance of favorable weather it is expected to speedily complete this long bridge and have the draw in position. By the time it is done the construction of the viaduct back to Knights Key, which is the present terminus of the road, will be started; this will require about 85 piers and about four months to build. As soon as the viaduct work is finished the building of the rest of the line will be comparatively easy. In the erection of the piers the working forces have been concentrated to complete each pier as rapidly as possible with safety in order to leave no work uncompleted should a hurricane develop, as that would destroy unfinished work and make necessary its removal and entire reconstruction.

#### Galveston-Houston Interurban.

A report from Galveston, Tex., says that substantial progress has been made on the construction of the Galveston-Houston Interurban Electric Railway. Between Texas City Junction, which is near Galveston, and League City 10½ miles of track have been built, and shell ballast is being put on. This section will be completed for service as speedily as possible for the transportation to League City of the machinery for the power plant which will be built there. It is fully expected that the entire line to Houston will be completed by the time that the Galveston Causeway is ready to handle its traffic. The company, heretofore reported, has ordered its equipment from the Cincinnati

(Ohio) Car Co. to the extent of 10 passenger coaches and two express cars. They will have a maximum speed of a mile a minute, and will be of the high-class interurban pattern.

Another report says that grading over most of the main line has been completed, and tracklaying will be finished probably within two months. At the League City power-house piling has been completed, and work on the foundation, for which excavation is now under way, will begin soon. Work has begun on a bridge 300 feet long across Sims Bayou, this being the last long bridge on the line, those at Dickinson Bayou and at Clear Creek having been completed.

#### Pecos Valley Southern.

[Special Cor. Manufacturers Record.]  
Pecos, Tex., October 17.

W. L. Carwile, president of the Pecos Valley Southern Railroad, is in Pecos in connection with the extension of that line south from Saragosa to Balmorhea. It is announced that the line will be immediately constructed to Balmorhea, and from that town to a point five miles south at the foot of the Davis Mountains. The rails for this additional construction have been shipped by the makers. The ties, which were ordered from Louisiana, are also on their way here. It is the intention of President Carwile and associates to have the line extended not only to Balmorhea, but to the Davis Mountains, the southern projected terminus of the road, by December 1 of this year.

This line, for the construction of which the citizens of Pecos gave an outright bonus of \$100,000, has been running trains into Saragosa for several weeks, and a very nice town has been built up there. However, owing to various and unavoidable delays, the road has not yet been able to get into Balmorhea, which is the center of activities in the irrigated district at the foot of the Davis Mountains. The charter of the Pecos Valley Southern calls for a terminus at either Marfa or Alpine, and it is understood that a survey has been made to cross the mountains, and one or the other of the two Southern Pacific points will be made the terminal for that end of the line.

PORTER A. WHALEY.

#### Wheeling to Pittsburg.

The Pittsburg, Steubenville & Wheeling Railroad Co. has been chartered in West Virginia to build a line from Wheeling to Pittsburg, about 54 miles. The line will be operated by electricity, and the incorporators are W. E. Hildebrand of Pittsburg, Pa.; H. G. Young, John C. Bond, Homer Gray and V. H. Stewart, all of Charleston, W. Va.

Mr. Hildebrand is reported as saying that a charter in Pennsylvania was secured some time ago, and an agreement has been made with the Pittsburg Railway Co. to enter Pittsburg over its tracks. The line will cost not more than \$2,000,000, and it is claimed cars can be run between Wheeling and Pittsburg in about two hours. Both passengers and freight will be handled. The distance by steam railroad is now 66 miles. About half of the rights of way for the new line have been secured, and, in addition to the two terminals, it will reach Mt. Lebanon, Ridgeville, Millers Run, Reising, McDonald, Midway, Burgettstown, Cross Creek, Avells, Independence and Wellsburg.

The enterprise is said to be backed by wealthy business men of Wheeling, Pittsburg, Wellsburg and Uniontown. Connection will be made with the Pittsburg Railway at either Carnegie or Beachview.

#### Piedmont Traction Rumors.

The Southern Power Co., according to rumors from Charlotte, N. C., contem-

plates considerably greater things in connection with the Piedmont Traction Co. than have been heretofore reported. It is said to have bought the property of the Rockingham Power Co. at Blewett Falls, and is negotiating with the Seaboard Air Line with a view to leasing its road from Charlotte to Wilmington, N. C., for operation by electricity. While the lease report is something new, the purchase of the power plant has not been unexpected. The plant is said to be more than half finished, but about \$1,000,000 more will be required to complete it. The estimated horse-power of the plant is 36,000. It is alleged that if the Seaboard route is not leased the traction company will build a line of its own through the same country, with branches to reach important points. No confirmation of the rumors could be secured at the offices in Charlotte.

#### New Equipment, Rails, Etc.

The United Railways of Baltimore will build 60 pay-as-you-enter cars, the car bodies to be erected by the J. G. Brill Company of Philadelphia, while the motors will be furnished by the Westinghouse Company of Pittsburg. The cars will be of the semi-convertible pattern, with double trucks, and they will seat 44 passengers.

The Dallas (Tex.) Street Railway Co. has placed in-service four prepayment cars on the South Belt Line, and will put others of the same pattern in service.

The Norfolk & Western Railway is reported in the market for 500 50-ton hopper cars. The company, according to a market report, is also contemplating the purchase of 15,000 tons of rails.

An official dispatch from Texas City, Tex., says that the Transportation Company directors have authorized the purchase of two switch engines and 20 flat cars.

#### Electric Roads Merged.

It is announced that the Washington, Mt. Vernon & Alexandria Railway and the Washington, Arlington & Falls Church Electric Railway, both operating out of Washington, D. C., have been merged under the name of the Washington-Virginia Railway Co., which is recently chartered. The capital stock of the new concern is \$3,000,000 authorized. It is alleged that the merger has been contemplated for some time. This consolidation is of more than passing interest, as it has been rumored that the electric railway proposed by Frank J. Gould of New York from Richmond via Ashland to Washington would connect with the Mt. Vernon line and enter Washington over its track.

#### Local Motor Car Service.

J. B. Grammer, vice-president, writes from Searcy, Ark., that the Searcy-Kensett Transportation Co. is a local stock organization of Searcy, renting the rails of the Missouri & North Arkansas Railroad from Searcy to Kensett, four miles, the latter point being a station on the St. Louis, Iron Mountain & Southern Railroad. A line will be built from the center of the town to connect with the Missouri & North Arkansas Railroad, and a motor car and trailer will be operated to and from Kensett for passengers, baggage, express and mail matter, meeting all trains on the Iron Mountain road. The capital stock is \$10,000. It is expected to be in operation by November 1.

#### Fairburn to Atlanta.

The Fairburn & Atlanta Railway & Electric Co., of which W. T. Roberts of Fairburn, Ga., is president, will build 10½ miles of line from Fairburn to College Park, Ga., including one cement bridge over the Atlanta, Birmingham & Atlantic Railroad. The route parallels the Atlanta

& West Point Railway through slightly rolling country. It has not been determined when bids will be invited. L. W. Roberts is chief engineer. The other officers are L. M. Hobgood, vice-president; J. H. Longino, treasurer; W. H. McLarin, secretary. Others interested as directors are J. F. Golightly, R. P. McLarin, J. T. Longino and C. A. Johnson, all of Fairburn, Ga.

#### Nashville and Gallatin Electric.

H. H. Mayberry, Franklin, Tenn., says that a subscription of \$75,000 has been secured in the country between Nashville and Gallatin, Tenn., for the electric railway which he proposes to build to connect the two cities, and it is expected to secure a subscription of \$25,000 at Nashville, which will doubtless be gained, because the first interurban railway constructed by Mr. Mayberry from Nashville to Franklin is successfully operated. The proposed line to Gallatin, including sidings, will have about 30 miles of track through a thickly-populated region.

#### May Build Another Tunnel.

The Pennsylvania Railroad Co., it is reported, is considering the possibility of building another tunnel at Baltimore to provide for its increasing traffic. The idea of a second tunnel has been suggested for some years. The railroad company is also said to be contemplating plans for operating trains by electricity through the present tunnel in order to keep it free from smoke. The Baltimore & Ohio tunnel to Baltimore has been operated by electricity and lighted by the same power ever since its opening 15 years ago. Power, it is said, would be obtained from the Pennsylvania Water & Power Co., which has just connected its plant at McCall's Ferry with Baltimore.

#### A Missouri Extension.

Louis Houck, president of the Chester, Perryville & Ste. Genevieve Railway and also of the Cape Girardeau & Chester Railroad, with headquarters at Cape Girardeau, Mo., confirms the report that it is contemplated to build a new line. He says that preliminary surveys are being made to build from Cape Girardeau about 50 miles to a point on the Mississippi River opposite Hickman, Ky. Major James F. Brooks is engineer in charge.

#### Railroad Notes.

The Florida East Coast Railway, according to a report from Ocala, Fla., contemplates building another line skirting the Everglades to Sanford, Fla., running from there to Fort Pierce or West Palm Beach. President Flagler is quoted as being authority for this report, and to have also said that plans are not fully agreed upon.

The Western Maryland Railroad Co. is furnishing a siding and station for F. Mertens' Sons, Cumberland, Md., who are developing 15,000 acres of orchard property on its line.

#### To Erect Plant at Sanford, Fla.

A dispatch from Sanford, Fla., states that the Virginia-Carolina Chemical Co., main offices at Richmond, Va., has purchased a tract of land 200x1200 feet and will erect a plant for the manufacture of various grades of fertilizer. It is announced that the first building to be erected will be 150x250 feet, of frame construction, the plant to be equipped for an annual capacity of 25,000 tons of fertilizer. The Atlantic Coast Line Railroad has extended its tracks to the property, and it is understood that arrangements are now being made for the construction of extensive docks.

## LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

#### BUYS THE COUNTY SEAT.

**Whiting Manufacturing Co.'s Extensive Plans in North Carolina.**

The Whiting Manufacturing Co. of Philadelphia and Asheville (N. C.), reported in the MANUFACTURERS RECORD as increasing its capital stock from \$1,000,000 to \$5,000,000 in connection with extensive developments in Graham county, North Carolina, writes us that the company has about 90,000 acres of land in Graham county, and has purchased the county seat of Robbinsville with the exception of the courthouse and some church property, and expects to build a three-band sawmill, planing mills, drykilns and a hardwood flooring plant. It is understood the company will establish an extensive lumbering camp at Robbinsville employing possibly 1000 men, and that it will construct a 25-mile steam railway to facilitate its operations. This railway is contemplated from a point on the Little Tennessee River, where the Slick Rock Creek enters, up the Little Tennessee to the mouth of the Cheoah River, and thence up this river to Robbinsville, a distance of about 40 miles. The Whiting Manufacturing Co. will, it is understood, build the railway up the Cheoah River to Robbinsville, a distance of 25 miles, and that the Southern Railway Co. will build the remainder, about 15 miles, down the Little Tennessee to connect with its Bushnell-Maryville-Knoxville branch at Fontanna. The cost of the Whiting portion of this railway is said to be estimated at \$500,000. Tannic-acid plants, wood-pulp mills and other industries are understood to be planned for the future.

#### THE VANDERBILT FOREST.

**Reported Option Upon Hardwood Lumber in North Carolina.**

[Special Cor. Manufacturers Record.]

Raleigh, N. C., October 17.

For 20 years lumbermen, notably dealers in hardwoods, have urged George W. Vanderbilt, the largest land-holder in North Carolina, to sell them the timber on his vast estate in Buncombe, Transylvania, Haywood and several other counties, covering an area of 250,000 acres. Mr. Vanderbilt has at last given an option on an immense area in Transylvania county, on his "Pisgah Forest" estate, lying along the railway operated by the Southern Railway Co. between Asheville and Toxaway. The option itself cost a great deal of money, and it is said will certainly be taken up. The sum offered Mr. Vanderbilt for the privilege of cutting the timber from this area is said to be \$250,000. There is a report that he has divided into blocks and sections his timber holdings, and that the timber of this will be sold on the stumpage basis. It is said that the contract calls for very careful cutting, so as to allow good regrowth of the forest, which is one of the finest in the United States, and also to give protection from fire.

#### Crossties.

In 1909 the total number of crossties of all kinds of wood reported as having been purchased was 123,754,000, costing \$60,321,000 at the point of purchase, as compared with 112,463,000, costing \$56,281,000, in 1908, and 153,700,000, costing \$78,950,000, in 1907. The latter year does not, however, represent the true standard of comparison, as it was one of unusual railroad development. The decrease in 1908 was about 26.8 per cent., but in 1909 the balance swung back to 80.5 per cent. of the 1907 record, and was, as stated, an increase of about 10 per cent. over 1908.

While there was considerable variation in the number of crossties purchased during the three years, the average cost per tie remained close to 50 cents.

A significant feature is the fact that in 1909 there were 16,437,000 crossties reported as purchased for new track, as against 7,431,000 in 1908 and 23,557,000 in 1907.

The purchases by steam railroads formed about 93 per cent. of the total in 1900, as compared with approximately 94 per cent. in both 1908 and 1907.

Of the total number of ties, 57,384,000 were oak, 9,068,000 of Douglas fir, 6,797,000 of Western pine, 6,778,000 of cedar, 6,629,000 of chestnut, 4,589,000 of cypress, 3,311,000 of tamarack, 2,642,000 of hemlock, 2,089,000 of red wood, 556,000 of white pine, 487,000 of lodgepole pine, 378,000 of gum, 225,000 of spruce, 195,000 of beech and 1,492,000 of all other.

#### Contracts for Modern Sawmill.

Announcement is made that contracts have been formally awarded for the construction of the proposed sawmill to be erected at Camden, Tex., by W. T. Carter & Bro., sales offices at Houston. This plant will replace the one recently burned, and will be of fireproof, steel and concrete construction. The mill structure will be erected on a concrete foundation, with concrete floors, the main building to be 64x208 feet. It will be equipped with two single-band mills, one large gang saw, rolls, transfers and steam appliances. A brick and steel structure will be erected for the power-house and equipped with high-pressure boilers of 800 horse-power and engines of 600 horse-power. Contracts have been awarded for the steel work to the Carnegie Steel Co., Pittsburg, Pa., and for the machinery to the Lufkin Foundry & Machine Co. of Lufkin, Tex.

#### Cutting and Logging in Arkansas.

Irby Bennett & Co., Tennessee Trust Building, Memphis, Tenn., reported last week to have purchased about 13,000 acres of timber lands in Arkansas, state that the tract is located 40 miles east of Little Rock and seven miles west of Brinkley, Ark., on the Cache River, the purchase price being \$200,000. It is estimated that the property contains from 30,000,000 to 35,000,000 feet of white and red oak and ash, 75,000,000 feet of red gum and several million feet each of elm, cypress and persimmon. It is the purpose of the company for the present to confine its operations to cutting and logging the oak and ash to the Rock Island Railroad, which extends four miles practically through the center of the tract. No machinery will be required and no buildings, except such as are necessary to house cutters, loggers and loaders.

#### Will Reorganize Lumber Company.

Following the purchase at receiver's sale of the L'Hote Lumber Co. by the National Realty Co. of New Orleans, it is announced that plans are being formulated for reorganizing the company with sufficient capital to operate its large plant for the manufacture of sash, blinds and doors exclusively. It is understood that Hart D. Newman, vice-president of the Commercial-Germania Trust and Savings Bank, New Orleans, and Charles Roth, president of the National Realty Co., have charge of the reorganization plans, and that C. F. Hardy and George L'Hote will serve the new company as managers. The purchase price of the property was \$133,500.

#### Wood Pulp in 1909.

The 253 wood-pulp mills in operation in this country in 1909 consumed 4,002,000 cords of pulp wood, costing \$34,478,000, an increase over 1908 of 655,000 cords.



The 1909 consumption included 2,421,000 cords of spruce, 560,000 of hemlock, 329,000 of poplar, 95,000 of balsam, 91,000 of pine, 37,000 of white fir, 37,000 of cottonwood and 183,000 of all other woods, and 249,000 of slabs.

#### Lumber Notes.

Lumber exports from Gulfport, Miss., during September amounted to 25,427,212 feet, board measure, and for the nine months ended September 30 to 233,497,956 feet.

The October meeting of the Lumbermen's Club of New Orleans was held at the Grunewald Hotel last week with D. H. Alexander presiding. Speeches were made by L. M. Pool of the Hibernia Bank, Geo. H. Terriberry, James A. Kirby and others.

The Havana Lumber Co., whose main offices are located at Tallahassee, Fla., announces that it has established a sales office in Atlanta, Ga. This company is a wholesale dealer in long leaf yellow pine lumber and timber.

The new sawmill of the Peavy-Byrnes Lumber Co. erected at Kinder, near Lake Charles, La., has been completed and put in operation. The plant cost approximately \$500,000, and has a daily capacity of 100,000 feet of lumber.

The Star Lumber Co. of Mayna, La., has organized with a capital stock of \$150,000 to establish a saw and planing mill. Its officers are O. S. Jones, president; Albert Kime, vice-president; C. E. Narry, treasurer, and John Burmeister, secretary and general manager.

### TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

#### The Alice Mill.

The Alice Cotton Mills, Easley, S. C., has been chartered with a capital stock of \$350,000 by E. H. Shanklin, W. M. Hagood, J. M. Geer, J. D. Hammett and others. Mr. Shanklin is president and treasurer, and Roy R. Smith is secretary. This company was reported previously as to build a 10,000-spindle and 300-loom plant. Its architect-engineer is J. E. Sirrine of Greenville, S. C.

#### The Northside Company.

The Northside Knitting Mills of Norfolk, Va., mentioned last week as incorporated with a capital stock of \$50,000, has purchased the Northside Knitting Co. plant and increased its output. This will be 500 dozen articles of men's and women's underwear. The mill is operated by electricity.

#### Improvements to Cost \$20,000.

The Eagle & Phenix Mills, Columbus, Ga., will expend \$15,000 for improvements, not \$25,000, as stated last week. These improvements have been contracted for, and will include erecting a 100,000-gallon water tank, installing a sprinkler system for the Lowell warehouse lately purchased and installing a new water-wheel.

#### Enlarging a Knitting Mill.

The High Point (N. C.) Hosiery Mills will add 125 knitting machines, and has erected an additional building to hold this new machinery. It is reported that \$25,000 will be the cost of the machinery. This company's present equipment is 411 knit-

ting machines, dyeing and finishing plant, etc., driven by electricity and employing 500 operatives.

#### Georgia Manufacturing Co.

The Georgia Manufacturing Co. of Gainesville, Ga., has been incorporated with a capital stock of \$50,000 by R. E. Green, R. E. Green, Jr., Evelyn E. Green and D. P. White.

#### Textile Notes.

F. G. James of Greenville, N. C., is interested in a plan to convert a plant that has been used for a knitting mill into a silk mill.

It is rumored that Dr. Stanford of Fort Smith, Ark., is interested in the organization of a \$300,000 stock company to guarantee the establishment of five knitting mills.

The Massey Hosiery Mills of Columbus, Ga., mentioned last week, has expended \$20,000 for new knitting machinery, improvements to dyehouse, etc., and has no plans for further improvements.

The Natchez (Miss.) Cotton Mill is reported to have added 50 looms and as having contracted for more looms. This company has 22,722 ring spindles, 208 broad looms, 428 narrow looms, etc.

Lawrence S. Holt and William E. Holt of Kings Mountain, N. C., have purchased the John Manufacturing Co. property, including mill of 5000 producing and 1920 twister spindles, mill cottages, 50 acres of land, etc.

The Perkins Hosiery Mills of Columbus, Ga., mentioned last week, has expended \$25,000 for new intermediate fly frames, openers in cotton-blowing system, 50,000-gallon water tank, electrical motors, rotary pumps, underground pipe, new water supply for sprinkler system, etc. The company has no further plans for improvements.

### MINING

#### Two Companies Organized.

For the purpose of developing and dealing in timber, coal and mineral lands two new companies have organized and incorporated in Virginia. One of these is the Pittsburg-Virginia Coal Corporation, with an authorized capital stock of \$1,000,000 and the following incorporators and officers: James T. Manning, president, Kansas City, Mo.; John E. Walker, vice-president; Charles E. Lewis, secretary; William H. De Vore, treasurer, and John K. Doolittle, all of Pittsburg, Pa. The Pittsburg-Virginia Development Corporation has also incorporated with a capital stock of \$100,000, and has organized with the following officers: James T. Manning, president, Kansas City, Mo.; John E. Walker, vice-president, and Charles E. Lewis, secretary, both of Pittsburg.

#### Norfolk & Western Tonnage.

Shipments of coal over the lines of the Norfolk & Western Railway during September amounted to 1,501,510 tons, including commercial and company coal. Of the total, the Pocahontas field supplied 921,471 tons of commercial and 80,203 tons of company coal; Tug River, 124,392 tons commercial and 37,950 company; Thacker, 125,236 tons commercial and 46,777 tons company; Kenova, 66,479 tons commercial and 14,005 tons company; Clinch Valley, 81,895 tons commercial and 3102 tons company.

L. M. Burdette, D. H. H. Arnold, J. Arnold, Jr., E. L. Maxwell and D. V. Moyle, all of Elkins, W. Va., have incorporated the Blackwater Company with a capital stock of \$250,000 to develop coal and timber lands.

### MECHANICAL

#### Cement Mill Power from Waste Heat.

In an interesting pamphlet entitled "Power for Cement Mills from Waste Heat," the Green Fuel Economizer Co. of Matteawan, N. Y., has published a booklet to illustrate and describe how power that is now being wasted in cement mills can be utilized. It is stated that probably 20 per cent. of the cost of making cement is represented by the fuel bill. Of this fuel, about 30 per cent. is required for the boilers in the power-house, and the remainder for the kilns. Of the heat liberated from the fuel burnt under the boilers, perhaps 60 to 65 per cent. is utilized in turning water into steam, the remainder escaping up the chimney to the atmosphere.

It is claimed half of this heat now wasted through the chimney can be saved and utilized for preheating the boiler feed water. This alone gives other benefits besides saving fuel. It increases the steam-producing capacities of the boilers, the percentage increase in capacity being roughly the same as the fuel saving. Further, the heating of the water precipitates a large part of the lime and other matter carried by the water, and which would form scale in the boiler. Several illustrations of the installations of economizers for preheating boiler feed water are in the pamphlet.

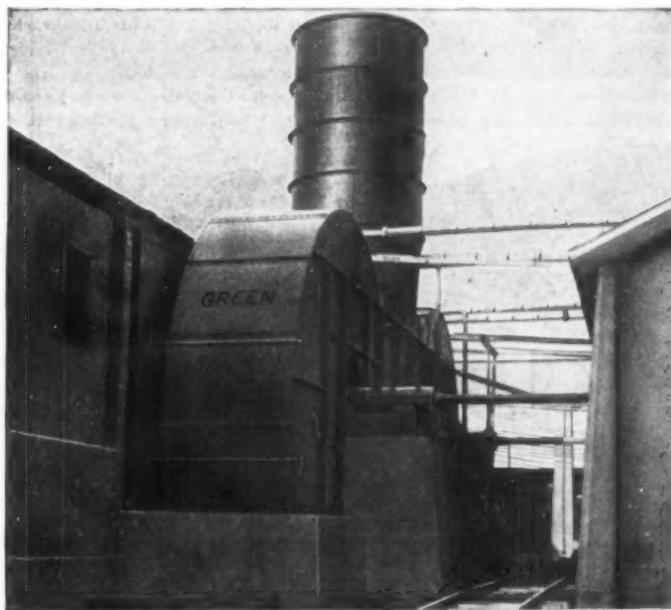
Another statement is that great as are

but the conditions of combustion were improved.

#### National Association of Master Gravel and Slag Roofers.

In a statement issued by the National Association of Master Gravel and Slag Roofers of America its aims and objects are set forth as follows: "Having in its membership most of the responsible roofing contractors in the larger as well as the smaller cities of the country, the association realizes the damaging effect that a poor tar and gravel roof has upon its business. That there are such roofs it does not deny, and it is the causes that make them possible that it is fighting to remove.

"One of the first matters to be considered was the indefinite specification, and a report recommending a standard specification was adopted at the 1909 annual meeting and resolutions were adopted standardizing roofing inspection in order to insure a faithful compliance to the standard specification. The roofing inspection specifications provide for cutting into the material in order to ascertain its exact composition. By cutting into a roof the number of plies of felt can easily be counted, and what is even more important, one can see that the moppings of pitch are complete as specified. If there is a difference of opinion regarding what inspection shows, a section six inches wide by two feet long



GREEN FUEL ECONOMIZER IN CEMENT MILL.

the savings from waste heat in the boiler plant, these are small compared with the economies that have been attained in connection with cement kilns. Of the heat liberated by burning fuel under the kilns, only a comparatively small percentage is consumed in the chemical processes; in fact, the chemical reactions cease as soon as the temperature of the gases falls below 1500 degrees Fahrenheit. The remainder of the heat between this temperature and the atmospheric temperature is wasted.

By the installation of a suitable arrangement of economizers and boilers it has been possible to obtain from these waste gases a large part of the power required for operating the plants. Several of these installations are illustrated and described. An interesting one is illustrated herewith. In this case, of the total amount of coal required at the kilns an amount equivalent to about six pounds per barrel of cement was saved by utilizing the heat present in the clinker as it left the kilns. Originally this heat was lost, but by means of special economizer equipment it was recovered and transmitted to the air blown into the kilns with the fuel. By thus preheating the blast the waste heat was not only saved,

taken from the roof at right angles to the way the felt is laid is sent to the secretary's office, together with the specifications under which the roof is laid. He will promptly make a detailed report upon what the inspection shows. The association, through its members and other sources, is in touch with most of the large work, and upon receipt of information to the effect that the specification is not being complied with, the matter is immediately taken up with either the owner or architect. The association is also actively trying to bring about a better understanding of the value of guarantees, which have become more of a factor in roofing than in any other work.

"The incline of the roof deck is another very important factor. The association is trying to have used on the proper inclines the kind of roofing most suitable. The slope or incline of the roof has much to do with determining what kind of roofing should be used, in order that the maximum results should be obtained. Co-operation of the association with the architects and property-owners has already been productive of good results."

The association is endeavoring to secure

as members responsible roofing contractors, in order to secure their co-operation and assistance in accomplishing the results desired. In a little over two years about 140 new members have joined. Information regarding the association and its work can be obtained from L. P. Sibley, secretary, Whitehall Building, New York.

#### The Rambler for 1911.

Announcement of the Rambler for 1911 has been made by the Thomas B. Jeffery Company of Kenosha, Wis.

The Rambler Sixty-five is furnished as a seven-passenger touring car or seven-passenger limousine, and 40-inch wheels are provided for the open styles of this model. The trimmings are of nickel, the wheel base 128 inches, the guards exceptionally graceful and the upholstery of the finest.

The Rambler Sixty-four is a 45-horsepower car, furnished as a five-passenger touring model, toy tonneau or landaulet, while Rambler Sixty-three has 34 horse-

upholstered, and pockets are attached to the doors. The standard color for all models is dark Brewster green striped in light green.

#### New Train-Stopping Device.

Charles T. Driggs of Erie, Pa., has patented a device that, in view of the desire for safer conditions of railway travel, should attract the attention of railway managers. It is understood that when the brakes on a train are to be set it is necessary to release from the train line a quan-

the space between the two tubes. The inner tube may be called the train line hose. It is of the same capacity as the standard hose now in use, and the air passes through it in the same manner. The pressure naturally finds its way through the openings in the inner tube to the space between the tubes, and thus leaves an equal pressure around and outside the inner tube.

It is obvious, therefore, that the inner tube cannot break, as the pressure is borne by the outer tube.

In the event of the bursting of the outer tube, the air escapes not directly from the train line, as at present, but through the openings in the inner tube, which openings are of such small size as to permit the escape of only such a volume of air as would be necessary to accomplish an ordinary "station stop," and therein lies the factor of safety.

L. J. F. Rooney of Tulsa, Okla., is interested in the new device, and it is probable a company will be organized in Tulsa to market the appliance.

#### Titelock Metal Shingles.

During recent years there has been an increasing demand for roof coverings other than wooden shingles, tile, slate, etc. This



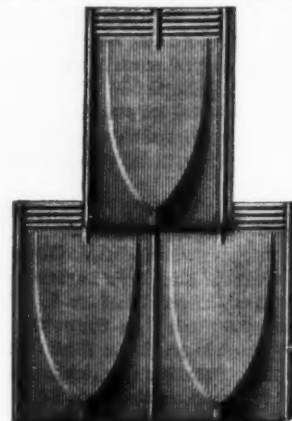
TITELOCK METAL SHINGLES.

demand has been largely met by metal shingles, and some consideration of these products is of interest. Herewith are five illustrations of the Titelock metal shingles manufactured by the Milwaukee Corrugating Co. of Milwaukee, with a branch at



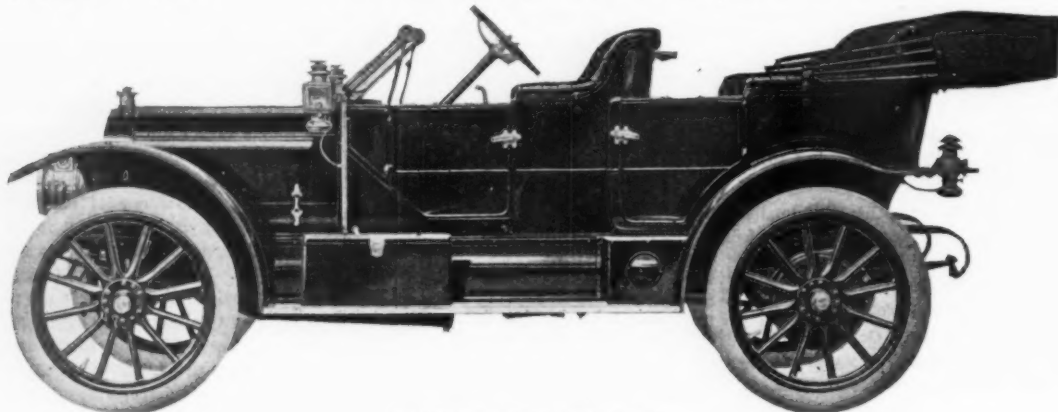
TITELOCK METAL SHINGLES.

Kansas City. This company has one of the large sheet metal working plants of the West, and it has been especially successful in marketing its shingles. These are not



TITELOCK METAL SHINGLES.

made from a galvanized sheet. They are made from full-weight terneplate, and after the shingles are completely formed they are dipped into paint or submerged in spelter, as the case may be. This method of



RAMBLER SIXTY-THREE, 1911.

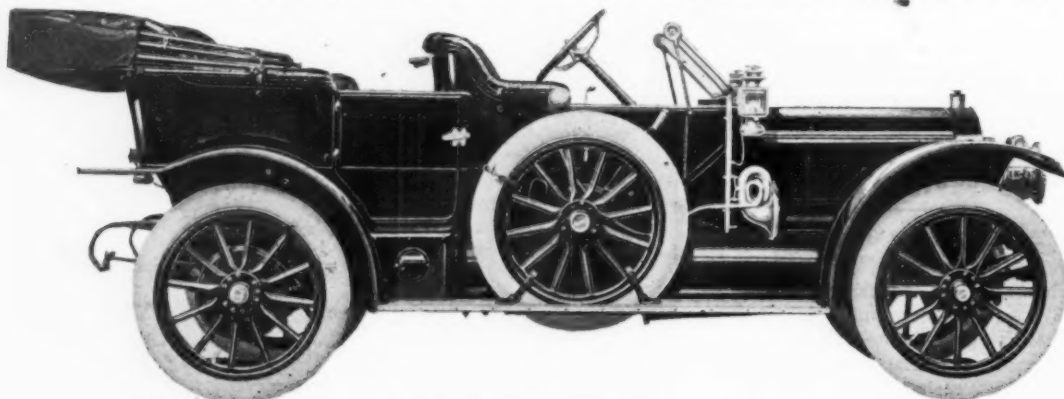
The line includes open and closed cars in nine different styles, all with detachable fore doors. The details and mechanical construction of all are alike, and there are two sizes, 45 and 34 horse-power.

Those fundamental Rambler advantages characteristic of previous models, including the offset crankshaft, straight line

power and is furnished as a five-passenger open car, two-passenger roadster, four-passenger coupe and town car.

All Rambler fore doors are detachable. The rear springs are now seven-eighths elliptic. Shock absorbers are provided for all models; the brakes are larger and more powerful, both inner expanding brakes and

tity of air; the greater the volume released the harder the brakes are set. The brakes are released again by throwing air back into the line. The handling of the air in and out of the train line is usually done from the cab by the engineer, although there are in passenger cars emergency valves which may be operated from any



RAMBLER SIXTY-FOUR, 1911.

drive, big wheels and tires and spare wheel, are continued.

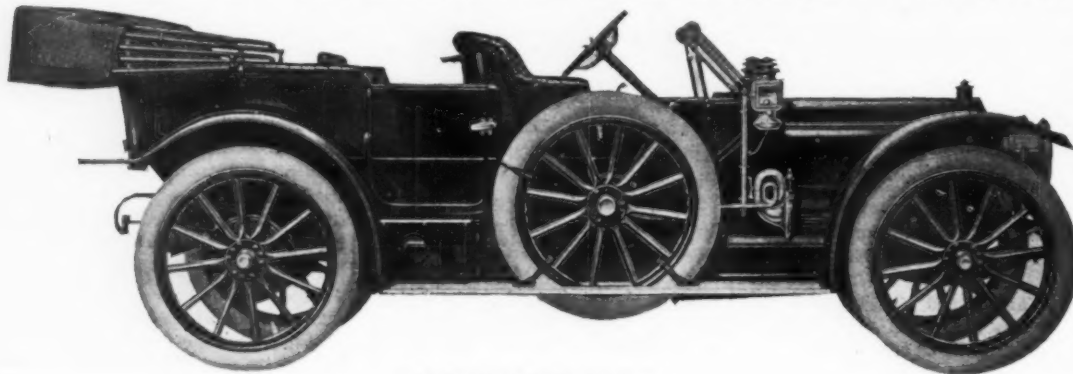
Standard equipment includes spare wheel and tire, shock absorbers, top and envelope, wind shield, headlights, Prest-O-Lite tank, combination electric and oil side and tail lamps and complete tool outfit.

The Rambler output for 1911 will again

outer contracting brakes having been increased in area a total of 97 square inches.

The carburetor is of a new and improved design. The clutch has been refined, providing a more smooth and positive engagement. Other minor improvements include the attachment of the lubricator to the engine instead of the frame, and the substit-

car through the train. It may be readily seen, therefore, that with a bursted air hose, which at present is a single tube connecting the various cars in a train, a continuous loss of air from the train would result, just as if the engineer left his controlling valve open constantly. With the bursting of an air hose when the train is



RAMBLER SIXTY-FIVE, 1911.

be limited to 2500 cars, although during the past year large additions have been made to the factory, and four buildings (aggregating 85,000 square feet in floor space) are now under construction. Ninety-two per cent. of Rambler parts are made in the Rambler factory.

tion of taper roller bearings for ball bearings in the rear axle at the differential.

The Rambler radiator is now very attractive, with a new supporting girder and the radiator crown sheet finished with a heavy roll flush with the radiator.

The interior of every tonneau is richly

in motion the brakes are at once applied, and with maximum force, resulting often in serious injuries to persons and damage to freight.

The Driggs device is composed of two tubes, with openings in the inner tube, which allows the air to escape from it to



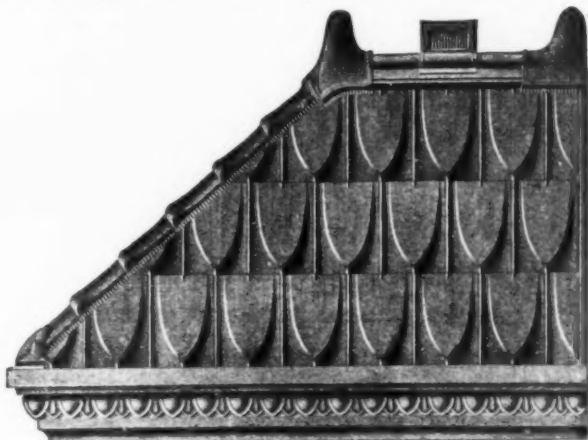
galvanizing metal shingles insures a perfect coating of spelter. There are no raw edges exposed to the weather, no places on which the zinc coating has been cracked,



TITELock METAL SHINGLES.

and the perfect covering absolutely protects the iron from corrosion.

The embossing is very clear and pronounced, and when the shingles are placed on a roof they present an excellent appear-



TITELock METAL SHINGLES.

ance. Hip and ridge covering, valleys, porch-flashing, finials and cresting-blocks and other appropriate trimmings are also furnished.

The shingles are made in two sizes, 7x10 inches and 10x14 inches, painted or galvanized in both styles, "A" and "B."

#### Steam Turbines for High and Low Pressure.

In the last few years the attention of engineers has been centered to a great extent upon low-pressure steam turbines and the possibilities of using them to increase the capacities and efficiency of existing

been the only recourse. This can be accomplished in two ways, either the pressure of the live steam can be reduced to the pressure at which the turbine is intended to operate, or the turbine can be so designed that both high-pressure and low-pressure steam can be used in it with good efficiency. This problem of using two steam pressures has been met by the De Laval Steam Turbine Co. of Trenton, N. J., in its type of single-stage impulse turbines. (See two accompanying illustrations.)

A machine intended to run on live or exhaust steam or both condensing or on live steam non-condensing is shown in Fig. 1. This turbine, which generates 150 horsepower for two 16-inch centrifugal pumps

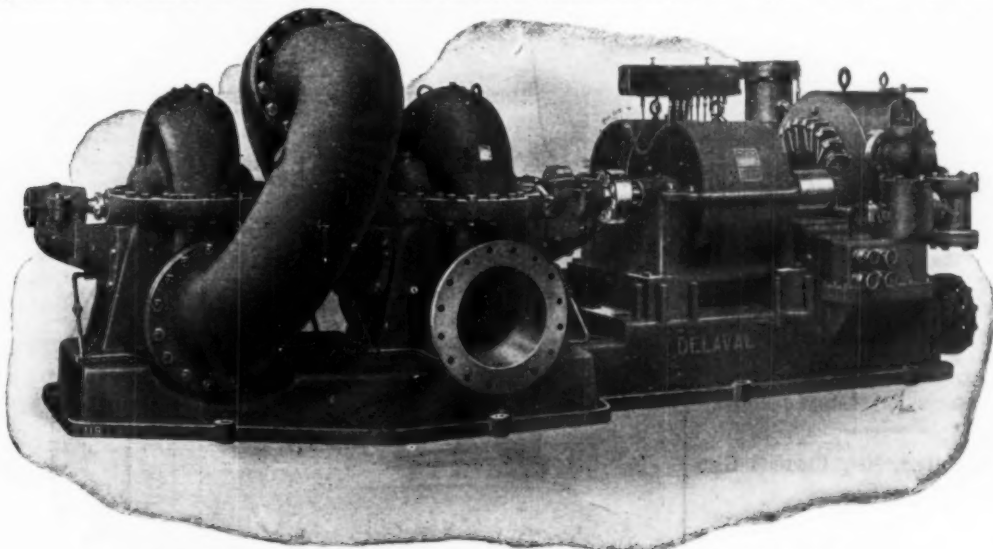


FIG. 1.—DE LAVAL TURBINE DIRECT CONNECTED TO CENTRIFUGAL PUMPS.

steam engine plants by utilizing the steam twice over.

In some cases low-pressure steam for operating these turbines is continuously available, while in others the supply is intermittent, consequently it has been necessary to provide other means of supplying steam to the turbines when it has not been available through the usual source. For shorter periods this difficulty has been overcome by using a regenerator, but for longer periods the use of live steam has

27 inches of mercury, averaging about 22 inches. There is a possibility of losing this vacuum entirely at times, due to the troubles with the engines or to air leaks, making it necessary to operate the turbine non-condensing.

This machine drives a De Laval centrifugal pump, raising 5000 gallons of water per minute against a total head of 65 feet to a purification plant during part of the time and supplying 4000 gallons of water per minute under a head of 95 feet to the

service mains during the remainder of the time.

Another application of low-pressure turbines is illustrated in Fig. 2. This little machine is installed in an ice plant, receiving the exhaust steam from the ammonia compressors and driving a 35-kilowatt Crocker-Wheeler direct-current generator supplying current for lighting and for the operation of two elevators, a machine shop and a coal elevator. The load is very fluctuating. The turbine develops 30 kilowatts with steam at atmospheric pressure when exhausting into a vacuum

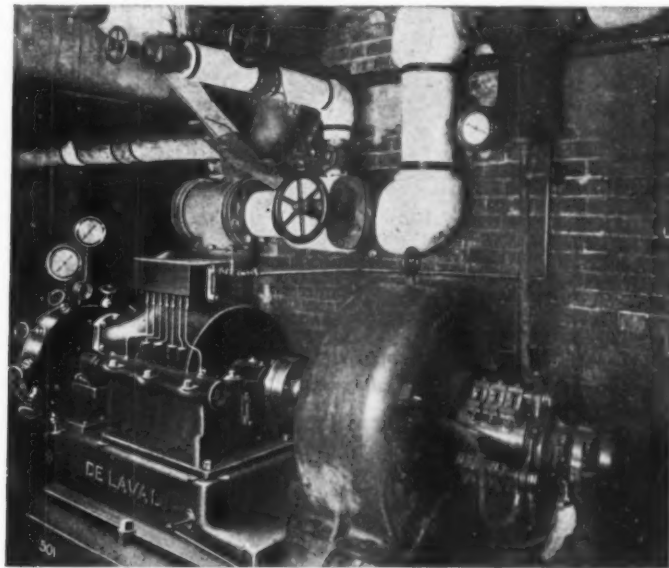


FIG. 2.—DE LAVAL TURBINE IN ICE PLANT.

of 25 inches, the steam consumption not exceeding 45 pounds per B. H. P. hour. The poor vacuum obtainable in this case is explained by the fact that the circulating water used in the condenser serving the turbine has already been warmed to a certain degree by passing over the ammonia condensers. When receiving steam at 95 pounds pressure and exhausting into a 25-inch vacuum the unit is able to develop 35 kilowatts with a steam consumption of 28 pounds per electrical horse-power hour. When running non-condensing the steam consumption is 43 pounds per brake horse-

by the United States Navy officials of fuel oil in place of coal for stoking the thousands of boiler horse-power necessary for the operation of our navy. Recent tests have proven oil superior to coal as fuel, as greater speed and greater steaming radius have been accomplished in every case when used.

The first of the oil-burning type of torpedo destroyers, the "Roe," was turned over to the Government for first trial on July 14, 1910. The trial was held on the Delaware breakwater course. In the speci-

fications the vessel was to make 28 knots; 31 knots was the record she made.

On April 14, 1910, tests were made at the works of the Newport News (Va.) Shipbuilding & Drydock Co. to note the working of the four boilers, fuel-oil burning apparatus and the fireroom forced-draft fans. The boilers are of the Thornycroft type, built by the Newport News company.

Interest attaches to the photographs taken at the time, showing the almost utter absence of smoke from the stacks of the "Roe," and the small quantity apparent even when the oil burners were opened excessively.

Great interest was taken by the naval engineers in the forced-draft fans, as the contractors were forced, through the urgent insistence of the American naval officers, to have these fans constructed and installed.

While the British, German, Italian and Japanese and United States navies have used "Sirocco" fans for ship ventilation and forced draft on coal-fired boilers, and the same blowers have been used for supplying blast to oil-burning forges and furnaces in industrial plants, the United States Navy was the first to apply them to the burning of oil aboard men-of-war.

"Sirocco" fans are built on the turbine principle. Those aboard the "Roe" are only 30 inches in diameter, but are supplying 23,000 cubic feet of air per minute at five-inch water-gauge pressure. As the steam turbines to which the fans are attached run at 1400 revolutions per minute, the intricate design necessary to embody strength and rigidity, and at the same time maintain the high efficiency required by the naval officials, was put up to the engineering department of the American Blower Co. of Detroit, sole manufacturer of "Sirocco" fans.

It is not generally known that this same company supplied 28 "Sirocco" fans for each of the recently tested and accepted battleships, "Delaware" and "North Dakota," and that the now building "Florida" and "Utah" are also being fully equipped,

power hour. Incidentally the exhaust from this turbine after condensation is used for ice-making, the absence of oil rendering it perfectly suitable for such purposes. The only item of running cost in this case is the small amount of oil required by the turbine.

#### Forced-Draft Fans on Torpedo Destroyers.

Great interest has been shown, especially in marine circles, over the recent adoption

both for mechanical draft and ship ventilation, with fans of the same manufacture.

The advantage is at once apparent of the torpedo-boat destroyer being capable of

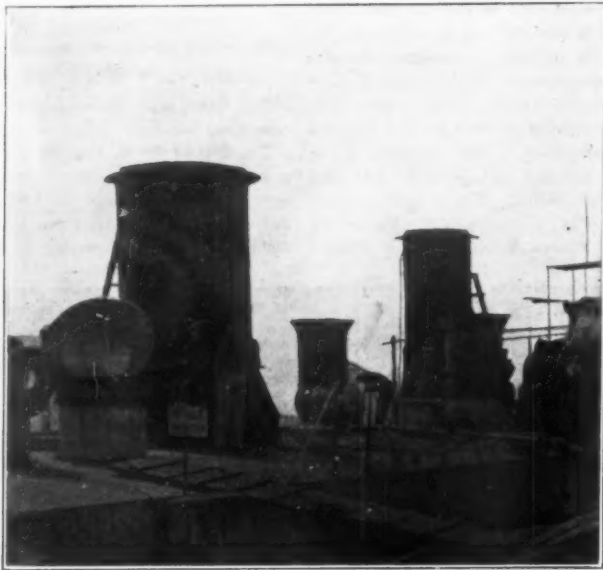


FIG. 1.—FORCED-DRAFT FANS ON TORPEDO-BOAT DESTROYER.

The enlisted man is delighted with the abolition of the dirty work of "coaling" sneaking up within close proximity of the enemy's ship with utter absence of smoke,

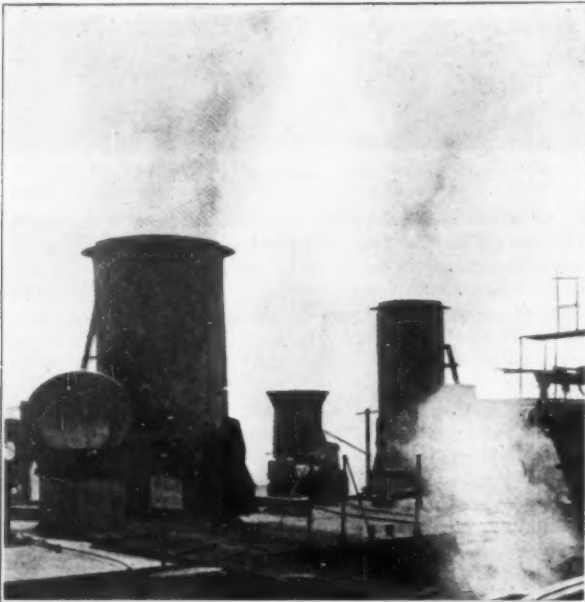


FIG. 2.—FORCED-DRAFT FANS ON TORPEDO-BOAT DESTROYER.

ship." He is still more pleased with the ease with which "oiling ship" is accom-

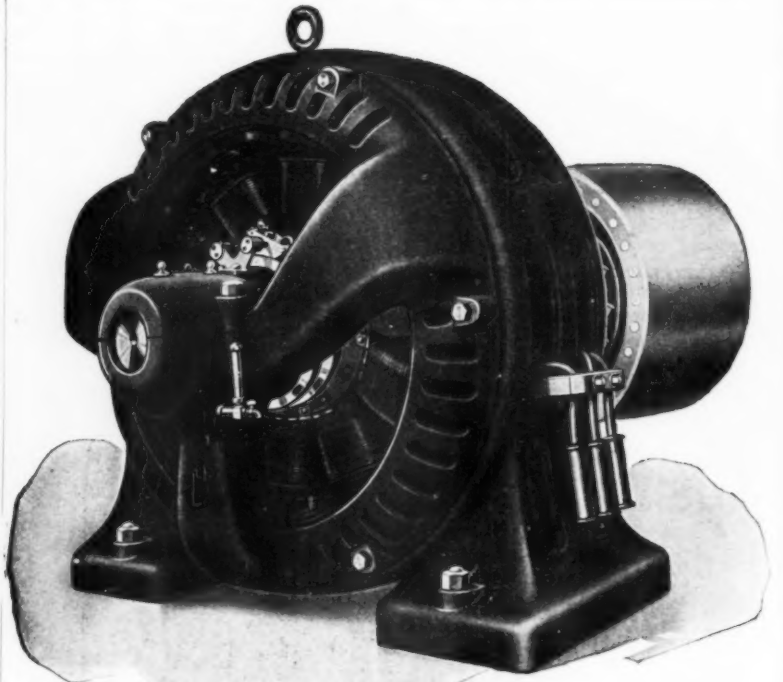
which, together with the color they are now painted, precludes the possibility of their detection even by the use of searchlights.

See the three accompanying views. Fig. 1 illustrates the United States torpedo-boat destroyer "Roe," showing smoke with 3.2 inches W. G. air pressure, with oil burners opened excessively. Fig. 2 is a view of the stacks during test, with 3 inches W. G. air pressure. Fig. 3 illustrates the "Sirocco" forced-draft fan, with direct-connected steam turbine on torpedo-boat destroyer.

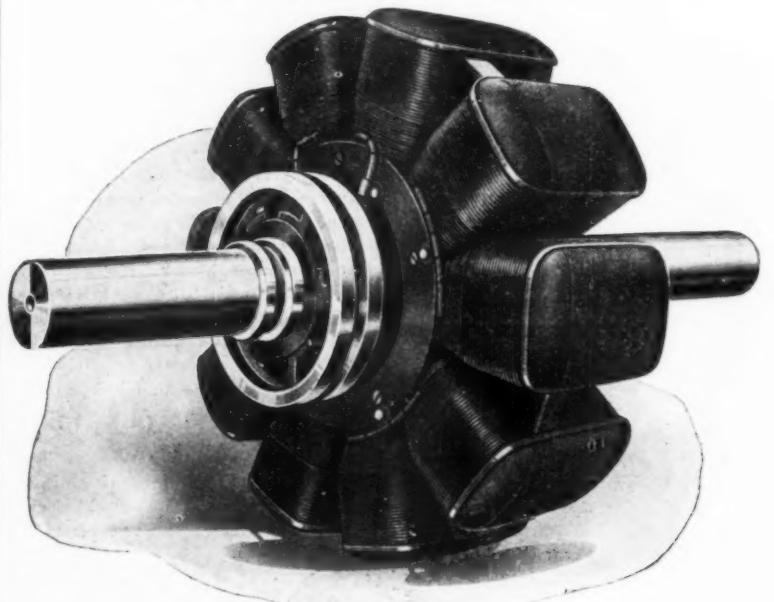
#### Triumph Alternating Current Generators.

A new line of alternating current generators is offered by the Triumph Electric Co. of Cincinnati. These machines are of the stationary armature and revolving-field type, built for either direct connection, coupling to an engine, or belt driven. The sizes range from 50 K. V. A. upwards, and may be obtained for single, two or three-phase circuits and for 240, 480, 600, 1200 or 2400 volts.

The special features are the thorough ventilation of all parts and the ability to operate in parallel with machines of other make. It is believed the two features will popularize these alternators to a large ex-



TRIUMPH ALTERNATING-CURRENT GENERATOR.



TRIUMPH ALTERNATING-CURRENT GENERATOR.

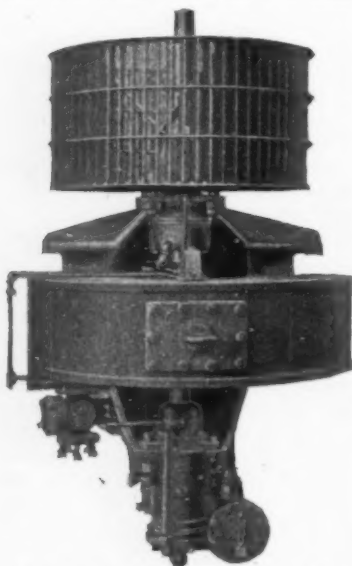
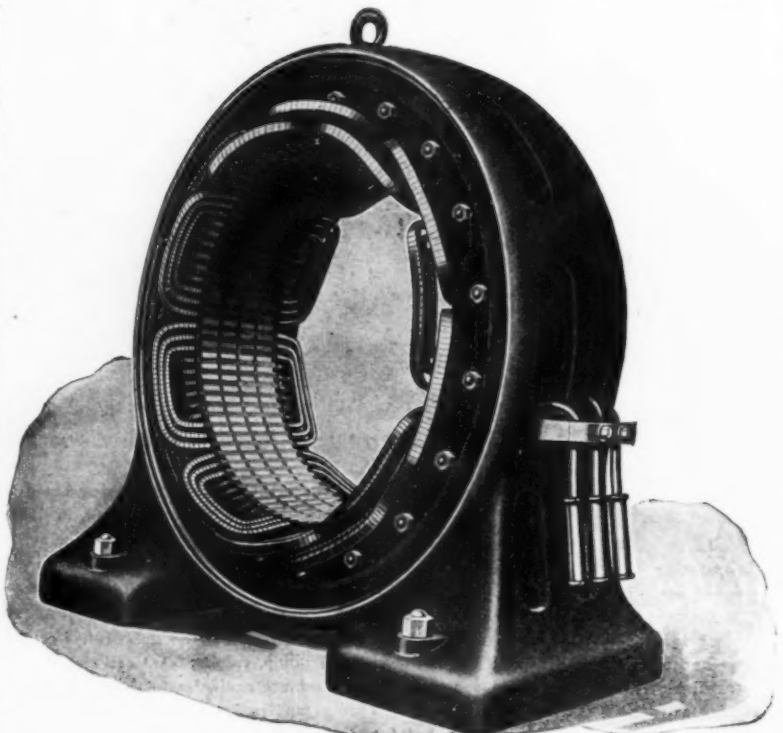


FIG. 3.—FORCED-DRAFT FANS ON TORPEDO-BOAT DESTROYER.

plished, and lastly, he is genuinely proud of the greater speed which the ship that he loves is able to attain.



TRIUMPH ALTERNATING-CURRENT GENERATOR.



tent, and in addition the design and construction are strong and serviceable.

The usual standard ratings of 35 and 40 degrees C. temperature rise have been



BRIGGS CONCRETE SPREADER.

adopted, and any machine can be furnished for either of these ratings, according to the duty it has to perform. Generally speaking, a 40 degree C. temperature rise will be advocated for machines which have to carry a non-inductive load, whilst a machine which has to carry an inductive load such as arc lamps or induction motors will be rated on the 35 degree C. basis.

The regulation of these new Triumph alternators is in accordance with the best engineering practice, and will vary from 6 per cent. on a machine with a 35 degree C. rise to 8 per cent. with a machine rated at 40 degrees C. temperature rise.

The use of a relatively large amount of copper in both the rotor and stator windings has reduced the copper loss to a minimum. In addition, due to the excellent design of the stator, the core losses are comparatively low, so that these machines have exceedingly high efficiencies. (See the three accompanying views.)

#### Briggs Labor-Saving Specialties.

Engineers, contractors and others interested in improved machinery for paving purposes will find it to their advantage to investigate the equipments designed, manufactured and offered by the Briggs Labor-Saving Specialty Co. of Waterloo, Iowa. This company, as its name indicates, makes a specialty of labor-saving devices of various kinds, some of its paving machinery being illustrated by four accompanying views. The Briggs concrete spreader is being used by more than two hundred paving companies in all parts of the United States and in Canada, the sales this year being four times those of 1908. It is the company's intention to introduce its devices throughout the South, where they are already used to some extent, the cities of El Paso, Fort Worth and Birmingham be-

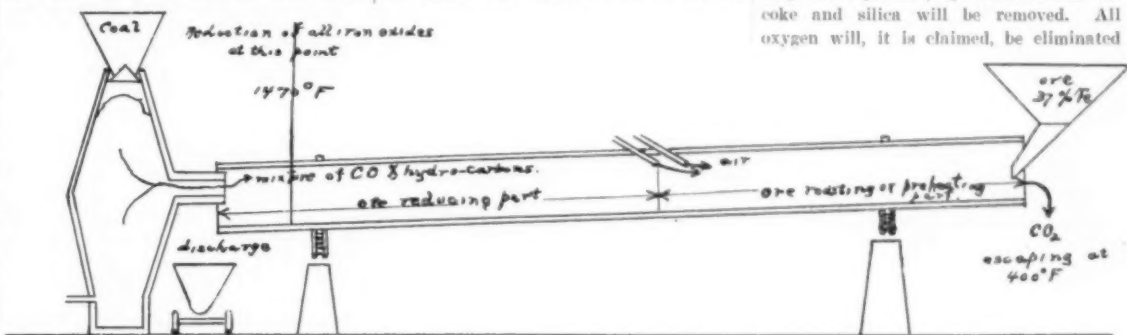
on street foundation work, the reasons being stated as follows:

"Greater daily yardage can be maintained than by any other method ever em-

as much as one of our spreaders will hold. By setting the batch mixer at the intersection, with the spout extending over the subgrade, all expense of both planking and

labor is saved, and this means cash saved. A more uniform mixture and a better surface can be maintained by this method than by hand mixing or by any continuous mix when handled in wheelbarrows. With this combination the men get to work like machines, and from one to four cents per surface yard can be saved which would otherwise be eternally lost. There has never been a single case where a contractor bought our spreaders and has since returned to his old method of laying concrete. Many of the largest and strongest contractors in the country who began using our system from three to six year ago are

employed. By placing the material at the intersection nothing occurs to damage the subgrade, the spreaders with their broad



ROTARY ORE-SMELTING FURNACE OF JONES STEP PROCESS.

tires acting like rollers and benefiting the grade. Every city engineer knows that buying spreaders again, and in larger quantities, as the old ones wear out. We are



BRIGGS CONCRETE MIXER AT WORK.

better concrete can be secured by mixing in a batch mixer and hauling in our spreaders. No extra help is necessary in dump-

constantly adding new contractors to our list of satisfied users."

The Briggs Labor-Saving Specialty Co.

increase the contractor's or engineer's profits.

#### New Iron-Making Process.

A number of prominent Western capitalists and railroad men have been experimenting with a new process for smelting low-grade ores, under a system known as the "Jones Step Process."

In brief, the process consists of smelting the ore in revolving kilns somewhat similar to those used in Portland cement manufacture, the ore being fed into the kilns at the upper end and the coal being blown in at the lower. The accompanying sketch gives some idea of this system and its simple construction as compared with the present methods.

As a result of tests extending over a two weeks' period, it is claimed the iron in the ore was fully metalized, all oxygen extracted and the ore charged with carbon from one-tenth to five-tenths per cent. The product was very hard. After passing through the rotary furnaces the metalized product will be crushed and passed over a magnetic separator, by which means the coke and silica will be removed. All oxygen will, it is claimed, be eliminated

within 24 hours after attaining a temperature of 1500 degrees.

To reduce and metalize three tons of ore running about 37 per cent., it is said that not more than 1200 pounds of coal or coke will be necessary, and the product of the rotary furnace can be made into muck bar iron with an equal amount of coal or coke. The results so far achieved have proven so satisfactory to those interested in this process that they are now expending \$250,000 for building the first commercial plant. This plant is being equipped to reduce 300 tons daily, and additional equipment will be installed to manufacture muck bar iron from the product.

In the development of the commercial end of the business it is intended to locate these plants at the ore deposits, carrying the coal to the ore instead of the ore to the coal. The outcome of the first commercial test of this system will be watched with considerable interest, owing to the broad economic effect it will have, if commercially successful, upon the utilization of a large amount of low-grade iron ore



LAYING CONCRETE BASE IN DES MOINES ON THE DAY AFTER A 1 1/4-INCH RAINFALL DURING THE NIGHT, USING BRIGGS MACHINERY.

ing included among those where the concrete spreader is now working. Referring to the Briggs concrete mixer and the Briggs concrete spreader, the company offers 10 reasons why they should be used

ing, as the man or boy who leads the horse does the dumping without the loss of a single second of time. The wheeling of concrete is the hardest work on the job, and it will require a dozen men to wheel

is prepared to present to inquirers data regarding its devices, and invites inquiries regarding the paving equipments above outlined, as well as other outfits that save labor in construction work and thereby

contained in various parts of the country. Some leading railroad men are identified with the undertaking, and they believe that they have solved the difficulties of smelting iron in this way.



# Construction Department

## TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and when this is necessary the statements are made as rumored or reported, and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

### HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular.

"In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned."

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription for the contract period to the Daily Bulletin is included.

### BRIDGES, CULVERTS, VIADUCTS

Ala., Tuscaloosa.—Tuscaloosa Mineral Railway, Woolsey Fennell, chief engineer, will construct two viaducts and one bridge in connection with proposed construction of railroad from Brookwood southwest for 21 miles; viaducts will be 450 feet long, 135 feet high, and 200 feet long, 115 feet high, respectively; bridge will have 150 feet span, 80 feet high, with approaches 500 feet long and 50 feet high. (Recently noted.)

Ark., Camden.—Ouachita County Levying Board will expend \$40,000 to construct steel bridge across Ouachita River recently noted; contract will not be let before April, 1911.

Fla., Pensacola.—Pensacola, Mobile & New Orleans Railway, L. G. Wilkinson, superintendent of construction, will construct (with its own men) trestle over Apalachee River; contracts will be let in about six months for draw and fixed spans of bridge to be built in connection with trestle.

Ga., Atlanta.—Fairburn & Atlanta Railway & Electric Co., W. T. Roberts, president, Fairburn, Ga., will construct one cement bridge across Atlanta, Birmingham & Atlantic Railway's tracks.

Md., Baltimore.—Pennsylvania Railroad, Alexander C. Shand, chief engineer, Philadelphia, Pa., and Major Joseph W. Shirley, city topographical engineer, will formulate plan for crossing on Lafayette Ave. at Lafayette Station; railroad proposes to lay 11 additional tracks and is considering construction of overhead crossing.

Miss., Gulfport.—Harrison county will construct bridge across Red Creek on Bond and Poplarville roads; specifications on file in

office of County Clerk; bids are being invited.

N. C., Columbia.—Polk county will construct bridge over Green River; bids received until November 7; F. M. Burgess, clerk County Commissioners. (See "Machinery Wanted.")

Okla., Tulsa.—Tulsa County Commissioners awarded contract to Canton Bridge Co., Canton, O., at \$68,970 to construct steel bridge across Arkansas River, near Bixby, Okla.; length 2300 feet; plans by T. C. Hughes of Tulsa; W. L. North, chairman County Commissioners. (Recently mentioned.)

Tex., Dallas.—John L. Young, County Judge, telegraphs Manufacturers Record that Dallas-Oak Cliff viaduct contract (reinforced-concrete construction) has been awarded at \$445,000 to Corrigan, Lee and Halpin, Kansas City, Mo.; county furnishes cement, about 55,000 barrels, for which proposals are invited until October 20, as stated in "Machinery Wanted" column of Bulletin October 12; construction to begin within 20 days and be completed by December, 1911. (Recent item not complete.)

Tex., Richmond.—Fort Bend county will vote November 4 on issuance of \$30,000 of bonds for construction of bridge across Brazos River at Thompson, and \$30,000 for bridge at Orchard. Address County Commissioners.

Va., Richmond.—City Council authorized street committee to obtain plans and specifications for bridge to replace present Mayo's bridge; estimated cost \$350,000, exclusive of site and approaches; Chas. E. Bolling, City Engineer. (Recently mentioned.)

Va., Staunton.—Valley Railroad, W. J. Bufington, general superintendent, Westline, Pa., has begun proposed rebuilding of bridge across Lewis Creek; 35 16-foot piles for foundation; 41-foot steel span.

### CANNING AND PACKING PLANTS

Fla., West Palm Beach.—Faber Brothers Company incorporated with \$10,000 capital stock by A. F. Faber (president), C. W. Faber, F. R. Poston and Geo. G. Currie.

Tex., Aldine.—Aldine Canning & Preserving Co. incorporated with \$130,000 capital stock by Victor F. Johnson, Emil E. F. Johnson and Frank O. Johnson.

Tex., San Antonio.—Chili and Tamales.—Gebhart Chili Powder Co. will erect plant with daily capacity of 20,000 cans of Chili and 8000 cans of tamales; cost, including machinery, \$75,000.

Va., Newport News.—Levinson & Co. will be organized with \$30,000 to \$50,000 capital stock by Max Levinson and others to erect buildings and establish meat-packing plant and stockyards to be known as Newport News Union Stockyards.

### CLAYWORKING PLANTS

Ala., Wylam.—Fire-bricks.—Harbison-Walker Refractories Co., general offices, Farmers' Bank Bldg., Pittsburg, Pa., will improve plant, including erection of 100-foot extension to main building, installation of two additional pans and six kilns, with corresponding increase for additional drier capacity and stockrooms; will increase daily capacity from 35,000 to 70,000 bricks; cost \$100,000. (Noted in June.)

Mo., Kansas City.—National Stone Brick Co. incorporated with \$75,000 capital stock by John D. King, James B. Turner and Dickson C. Collier.

N. C., Lincolnton.—R. F. Hoke is negotiating relative to establishment of clayworking plant.

Okla., Osage.—Brick.—Harry Remington of Red Fork, Okla., will establish brick plant.

Tex., D'Hanis.—Brick.—Seco Pressed Brick Co. incorporated with \$40,000 capital stock by August Rothe, Fritz Rothe, Louis Rothe and others.

W. Va., Clarksburg.—Bricks.—Clarksburg Brick Works incorporated with \$25,000 capital stock by J. N. Coffman, Hugh Jarvis, Cecil C. Jarvis and others.

### COAL MINES AND COKE OVENS

Ark., Hartford.—Rush & Bohanan Coal Co. incorporated with \$3000 capital stock by W. H. Rush, E. Bohanan and J. A. Marimont.

Tenn., Knoxville.—Anchor Coal Co. incorporated with \$35,000 capital stock by J. D. Raht, L. D. Smith and Leon Jourlmon.

Tenn., Knoxville.—Anchor Mining Co. incorporated with \$85,000 capital stock by J. D. Raht, L. D. Smith and Leon Jourlmon.

Tex., Cotulla.—L. A. Kerr, F. B. Earnest and others contemplate, it is reported, developing coal mines.

Va., Richmond.—Pittsburg-Virginia Development Corporation incorporated with \$100,000 capital stock; James T. Manning, president, Kansas City, Mo.; John E. Walker, vice-president, and Charles E. Lewis, secretary, both of Pittsburg, Pa.

Va., Richmond.—Pittsburg-Virginia Coal Corporation incorporated with \$1,000,000 capital stock; John T. Manning, president, Kansas City, Mo.; John E. Walker, vice-president; Charles E. Lewis, secretary, and William H. Devore, treasurer, each of Pittsburg, Pa.

W. Va., Elkins.—The Blackwater Company incorporated with \$250,000 capital stock by L. M. Burdette, D. H. H. Arnold, J. Arnold, Jr., E. L. Maxwell and D. V. Moyle.

W. Va., Moundsville.—Franklin Coal Co., Freeport, Pa., secured lease on coal mines of Panama Coal Co. at Moundsville; reported will construct tipples to river and increase output.

W. Va., Red Jacket.—Red Jacket Consolidated Colliers Co. (main offices, Roanoke, Va.) will construct steel tippie with daily capacity of 2000 tons of coal, and install coal-cutting machines. W. N. Cummings of Red Jacket is chief engineer.

W. Va., Logan.—Aracoma Coal Co. (recently reported incorporated with \$100,000 capital stock) will develop 1450 acres of land; daily output 1000 to 2000 tons coal; date of opening machinery proposals not set; E. B. Hubbard, engineer in charge; L. J. Stump, president; E. B. Hubbard, vice-president; A. J. King, Pocahontas, Va., secretary-treasurer. (See "Machinery Wanted.")

### COTTON COMPRESSES AND GINS

Ark., Lake City.—Nichols, Beck & Co. incorporated with \$20,000 capital stock; W. C. Beck, president; J. D. Pagan, vice-president; J. G. Nichols, secretary-treasurer.

N. C., Lora.—Lora-Gin & Fertilizer Co. incorporated with \$10,000 capital stock by L. C. Stevenson, J. L. Stevenson and others.

Tex., Boz.—Boz Gin Co., recently reported incorporated with \$5500 capital stock, has purchased ginnery; will not need any further equipment this season; daily capacity, 30 bales cotton; main office address, Waxahachie, Tex.

Tex., Harlingen.—Harlingen Ice & Gin Co. will enlarge plant.

### COTTONSEED-OIL MILLS

S. C., Batesburg.—Batesburg Cotton Oil Co., recently reported incorporated with \$35,000 capital stock, has constructed 40-ton oil mill (covering six-acre space of ground) previously announced; completed plant to have 11 buildings; C. E. Jones, secretary.

Tex., Galveston.—E. H. Young will rebuild cottonseed grinding and crushing plant recently reported burned; loss \$60,000.

Tex., Texas City.—E. H. Young of Galveston, Tex., will establish cottonseed delinting plant; daily capacity 300 tons of cottonseed.

Va., Portsmouth.—Portsmouth Cotton Oil Refining Corporation will rebuild portion of plant reported burned; loss \$50,000.

### DRAINAGE AND IRRIGATION

Ark., Star City.—Grassy Lake Drainage District No. 1 in Lincoln county will begin within 60 days construction of system to drain 4000 acres of land; main canal will be about three miles long, 12 feet wide at bottom, 24 feet at top and 6 to 8 feet deep; estimated that about 100,000 cubic yards of dirt will be removed in excavation of main canal and laterals; Edward Young, Youngstown, Ark., is secretary Board of Commissioners; Parkes & White, Pine Bluff, Ark., are engineers in charge of survey.

Ga., Tennille.—J. R. Crandall, Midville, Ga., is promoting organization of Georgia-Oconee Plantations to reclaim about 10,000 acres of alluvial lands in Oconee River bottom in Wilkenson county between Tennille and Toombsboro, Ga.; plan is to construct levees above high-water mark, draining at first about 1000 acres, and to reclaim from 1000 to 2000 acres each year thereafter until entire property is drained; reports state ultimate investment may be \$500,000.

La., Franklin.—Avoca Reclamation Co. incorporated with \$50,000 capital stock for reclaiming swamp land in St. Mary and adjoin-

ing parishes; incorporators are E. A. Pharr, John A. Pharr, Henry N. Pharr, Earl S. Barnett, R. E. Milling and others.

La., Kenner.—St. Charles Land Co., John A. Kruse, consulting engineer, 706 Gaff Bldg., Chicago, Ill., will construct reservoir system in connection with reclaiming of 7500 acres of land (recently noted as being surveyed preparatory to drainage); reservoir system includes canal, 2½ miles long, 45 feet wide, 8 feet deep and 10 miles of canals ½ mile wide and 3 feet deep; also 100 miles of ditches 4 feet wide and 3 feet deep.

La., Lafayette.—First Drainage District of Eighth Ward voted bond issue for drainage system. Address District Commissioners.

La., New Orleans.—Eugene Pharr and associates purchased property of Louisiana Reclamation Co., including about 12,000 acres of swamp land; understood purchasers will reclaim property.

La., New Orleans.—Ohio-Louisiana Plantation Co. organized with \$200,000 capital stock by M. C. Trout, John C. Jones, John B. Crouch, Frank F. Haddix and M. C. Baker; purchased swamp lands in Lafourche parish and will reclaim.

Miss., Cleveland.—Bollivar County Drainage Commissioners awarded following contracts for excavation of 52.6 miles drainage canals: R. H. & G. A. McWilliams, at 10.39 cents per cubic yard, in Bogue Hasty; length, 35,715 feet; average cut, 5 feet; bottom widths, 28 and 40 feet; excavation, 317,250 cubic yards. N. C. McGinnis & Co., at 15.25 cents per cubic yard, in East Bogue Hasty; length, 70,839 feet; average cut, 5.1 feet; bottom widths, 10 and 12 feet; excavation, 213,650 cubic yards; and at 18.25 cents per cubic yard in Pecan Bayou; length, 51,300 feet; average cut, 5.5 feet; bottom widths, 10, 12 and 14 feet; excavation, 163,215 cubic yards. R. H. & G. A. McWilliams, at 14.99 cents per cubic yard in Icy Bayou; length, 54,036 feet; average cut, 4.6 feet; bottom width, 10 feet; excavation, 133,690 cubic yards; and at 13.99 cents per cubic yard in West Bogue Hasty; length, 66,073 feet; average cut, 4.4 feet; bottom widths, 10, 12 and 20 feet; excavation, 146,220 cubic yards; total length, 52.6 miles; total excavations, 974,925 cubic yards. (Recently mentioned.)

Tex., El Campo.—Wharton County Commissioners, Wharton, Tex., ordered election to be held November 10 to vote on issuance of \$350,000 of bonds for drainage purposes; will open Tree Palacios Creek, 60 feet wide, and take in water shed of Tree Palacios, Blue and Carancha creeks, providing drainage for 125,000 acres.

Tex., Pecos.—Pecos & Toyah Lake Irrigation Co. filed charter and plans proceeding with construction of irrigation system; contemplates ditch 65 miles long to irrigate 22,000 acres of land; \$738 acres to be used for reservoir; reported construction has been financed and will soon begin; capital stock \$1,500,000; J. N. Levin, second vice-president, Rutherford, Tex. (Previously mentioned.)

### ELECTRIC LIGHT AND POWER

Ala., North Birmingham, Station Birmingham.—City Council decided to expend \$3000 for improvements to light plant and waterworks; Maury Nicholson, City Engineer. (See "Water-Works.")

Ark., Little Rock.—City awarded contract to Loftis Collamore of Little Rock to erect electric-light plant at foot of Broadway; building to be 42x100 feet; capacity for 1000 lights; cost \$7500; plans by Theodore Sanders, 710 Southern Trust Bldg., Little Rock; machinery contract awarded; cost of building and fixtures completed estimated at \$55,000; William L. Rogoski, chairman electrical committee. (Recently mentioned.)

Fla., Fort Meade.—City Council granted franchise to S. T. Rivers for electric-light and power plant.

Fla., Lakeland.—Board of Public Works, C. W. Deen, chairman, will receive bids until November 10 for improvements to electric-light and water-works plant recently noted; Wm. L. Lyon, consulting engineer, 305 Duval Bldg., Jacksonville, Fla. (See "Machinery Wanted.")

Fla., Sanford.—City will, it is reported, install additional machinery in electric-light plant at cost of \$20,000.

Fla., St. George's Island (not a postoffice). Company organized with George W. Saxon president, Tallahassee, Fla., will construct electric-light system. (See "Land Developments.")



Ga., Augusta.—Augusta Street Railway & Lighting Co. and Augusta-Aiken Interurban Railway will, it is reported, make improvements and extensions; F. Q. Brown of Redmond & Co., New York, has been elected president.

Ga., Dublin.—City will vote December 6 on issuance of \$30,000 of bonds for improvement of electric-light plant and water-works. Address The Mayor. (Recently mentioned.)

Miss., Osyka.—City will construct electric-light and water-works plant recently noted; will install 30-kilowatt electric generator and two 500,000-gallon pumps; Xavier A. Kramer, Magnolia, Miss., engineer in charge of construction; cost about \$20,000; plans and specifications at offices of Mayor and engineer, who will furnish synopses. (See "Machinery Wanted.")

Mo., Columbia.—City has engaged M. E. Fawkes as engineer in charge of improvements to electric-light plant and water-works; proposed improvements to electric-light plant include erection of building and boiler plant, changing are light to magnetite system, rearrangement of street-lighting system; will install 750 electric generating plant, comprising new 500-kilowatt high-pressure steam turbine generating unit and 250-kilowatt generating unit; \$125,000 bond issue voted. (Recently mentioned.)

Mo., King City.—Fred Thompson has, it is reported, submitted proposition to City Council to install electric-light plant.

N. C., Smithfield.—City will construct electric-light plant; bids will be received until November 1; James A. Wellons, Mayor. (See "Machinery Wanted.")

Okla., Henryetta.—Henryetta Light & Power Co., B. T. Lilly, secretary and manager, will establish electric-light and ice plant; all contracts let. (See "Ice and Cold-Storage Plants.")

Okla., Pryor.—W. L. Jones has plans by Archer & Co., engineers, 426 Beals Bldg., Kansas City, Mo., for electric-light and ice plant recently noted; machinery to be installed includes 80 and 160-horse-power high-speed engines, two 100-horse-power fire-tube boilers, one 200-horse-power open-type heater, two separators, two boiler-feed pumps and steam piping, 50 and 100-kilowatt engine-type alternators, three panel switchboards, are regulator and panel; also 10-ton ammonia compression distilled-water ice-making plant complete, etc.; bids opened October 12.

Tex., Georgetown.—City has voted on \$45,000 bond issue for purchase of electric-light plant and water-works from W. N. Cole & Co. of New York.

Tex., McAllen.—Ice & Light Co. incorporated with \$50,000 capital stock by A. L. Strang, C. T. Brown and George Quistead.

Tex., Texas City.—Texas City Transportation Co. authorized installation of another 500-kilowatt electrical generator; H. B. Moore is general manager. (See "Warehouses.")

Tex., New Braunfels.—New Braunfels Power Co. incorporated with \$300,000 capital stock by Gustave Dauer and William Kuehler, both of New Braunfels, and L. H. Kuehler of Seguin, Tex.

Va., Graham.—Town Council contemplates granting franchise to Graham Railway & Electric Co., Walter Graham, representative.

### FERTILIZER FACTORIES

Ala., Montgomery.—Sellers & Orum Company will erect plant addition and increase annual capacity from 5000 to 10,000 tons fertilizer; addition 115x55 feet, making entire length 230 feet; cost of building and additional bagging machinery, \$10,000.

Fla., Jacksonville.—American Agricultural Chemical Co., main office New York, will make improvements to plant on Tallard Ave. near 21st St., including construction of dock 225x35 feet; tower and hoist, double-track railway, bag factory, etc.

Fla., Sanford.—Virginia-Carolina Chemical Co., main office Richmond, Va., will erect fertilizer factory; construct dock facilities; first building 150x250 feet; frame factory construction; capacity 25,000 tons fertilizer annually.

Ga., Milledgeville.—Central Georgia Guano Co. awarded contract to C. T. Gifford of Girard, Ga., for erection of fertilizer factory; cost \$10,000; operated by electricity furnished by local company; contemplates later increasing capital stock to \$30,000. (Recently noted.)

Ga., Milledgeville.—Baldwin County Fertilizer Co. incorporated with \$25,000 capital stock by J. H. Ennis, M. S. Bell, W. T. Gardner and others. (Recently noted.)

S. C., Rock Hill.—Rock Hill Fertilizer Co., recently reported organized to establish factory, will erect 50x100-foot building; ordinary and mill construction; cost \$2000; construction by owner; machinery purchased; R. T. Fewell, president; B. M. Fewell, secretary.

### FLOUR, FEED AND MEAL MILLS

Miss., Columbus.—Refuge Cotton Oil Co., main office, Vicksburg, Miss., will install grist mill recently noted; daily capacity 100 tons mixed feed and 500 bushels cornmeal. (See "Machinery Wanted.")

N. C., Statesville.—Star Milling Co. is name of company to establish flour mill recently noted; Robinson Manufacturing Co., Muncy, Pa., prepared plans for building, and has machinery contract; cost of building \$1200; day's labor; cost of machinery \$5000; daily capacity 60 barrels meal; D. A. Morrison, president; R. C. Morrison, vice-president; Thomas O. Morrison, secretary-treasurer.

Tex., Mason.—William Ellebracht will not establish flour mill as recently stated.

### FOUNDRY AND MACHINE PLANTS

Mo., St. Louis.—Engines, etc.—Fulton Iron Works will erect one-story shop building; cost \$14,000.

Okla., Tulsa.—Boilers and Tanks.—Tulsa Boiler Manufacturing Co., C. W. Crozier, manager, will erect building, corrugated iron, wooden frame, 75x300 feet; will equip for manufacturing boilers and tanks; machinery purchased. (Recently mentioned.)

Tex., Houston.—Tofte Boiler and Sheet Iron Works, W. E. Nicholson, secretary-treasurer, will not make any addition to buildings or equipment, as was recently noted.

Va., Portsmouth.—Machinery.—Nicholson & Powell Machine Co. incorporated with \$5000 capital stock; L. O. Nicholson, president; M. J. Nicholson, vice-president; E. B. Powell, secretary-treasurer.

W. Va., New Cumberland.—Foundry.—Davis-Price Foundry & Machine Co. will rebuild plant recently noted burned; will not award contracts.

W. Va., New Cumberland.—Davis-Price Foundry & Machine Co. will rebuild foundry recently reported burned at loss of about \$40,000; new structure will be one story.

### GAS AND OIL DEVELOPMENTS

La., New Orleans.—Rita Drilling Co. incorporated with \$15,300 capital stock by James W. Porch, E. R. Ogden, Geo. McDonald and others.

La., Shreveport.—Shropshire Oil Co. incorporated with \$30,000 capital stock; Florence P. Shropshire, president; H. C. Brewster, vice-president; Wheeler Shropshire, secretary; H. L. Heilprin, treasurer.

Okla., Muskogee.—Theron Oil Co. incorporated with \$20,000 capital stock by C. L. Thomas, Geo. S. Ramsey and others.

Okla., Osage.—Prairie Oil & Gas Co., main office, Independence, Kans., purchased holdings of A. T. Francher in Osage Reservation, consisting of 28,000 acres of leases with daily production of 400 barrels of oil.

Okla., Tulsa.—Modern Oil Co. incorporated with \$10,000 capital stock by A. Miller Hammett, J. I. Gillespie and C. W. McCarty.

Okla., Tulsa.—Santa Clara Oil Co. incorporated with \$20,000 capital stock by C. W. Deming, D. C. Acosta and others.

Okla., Tulsa.—Lewis Oil Co. incorporated with \$50,000 capital stock by Geo. L. Roberts of Pittsburg, Pa.; Albert Brown and E. M. Riese of Tulsa.

W. Va., Clarksburg.—Columbia Gas Co. incorporated with \$50,000 capital stock by V. L. Highland, S. C. Denham, E. B. Delson, M. G. Sperry and C. M. Sperry.

W. Va., New Cumberland.—Sutton Bros. incorporated with \$8000 capital stock by H. L. Sutton of New Cumberland, N. A. Sutton, A. H. Sutton, both of Steubenville, O., and others.

### ICE AND COLD-STORAGE PLANTS

Fla., St. Petersburg.—S. F. Chamberlain (until recently of Beloit, Wis.) is promoting organization of company to establish four-ton ice plant.

Fla., St. Augustine.—A. E. Burke, 92 Cedar St., contemplates installation of three or five-ton ice plant. (See "Machinery, etc., Wanted.")

Ga., Atlanta.—Atlantic Ice & Coal Corporation will expend \$300,000 to increase efficiency and capacity of plants at Atlanta, Chattanooga, Rome, Augusta, Jacksonville, Macon, Albany and Columbus; plans under way; most of machinery and building materials purchased.

Ga., Atlanta.—Southern Ice & Coal Co. incorporated with \$100,000 capital stock by Amos W. Brazelton, Robert Q. Fuller and W. A. Fuller.

Okla., Altus.—People's Ice Co. incorporated with \$25,000 capital stock by L. K. Jones, Carl Weimer, W. B. Wright and others.

Okla., Henryetta.—Henryetta Light & Power Co. is name of company to operate electric-light and ice plant recently noted to be established by Lilly & Hockenberry; awarded contract to Williams Bros., Henryetta, for erection of 51x80-foot building; brick; asbestos roofing; cost \$4500; placed order for 12-ton ice plant; B. T. Lilly, secretary and manager; J. M. Hockenberry, treasurer.

Okla., Pryor.—W. L. Jones has plans by Archer & Co., engineers, 426 Beals Bldg., Kansas City, Mo., for 10-ton ammonia compression distilled-water ice plant complete; bids opened October 12. (See "Electric-Light Plants.")

Okla., Vinita.—Vinita Electric Light, Ice & Power Co., recently noted to improve plant, will erect \$15,000 fireproof building; day's labor; C. E. Lahman, secretary, engineer in charge; electrical machinery, to include dynamos, engines, etc., has been purchased; date of opening bids for ice machinery not set; cost \$25,000.

Tex., Christine.—Dr. C. F. Simmons will develop 55,000 acres of land; Ehrenborg & Johnson, Gibbs Bldg., San Antonio, engineers; survey for three townships will be made on same property; subdividing into 8, 10, 20, 40 and 80-acre tracts.

Tex., Galveston.—Galveston Brewing Co. will not enlarge refrigerating and ice plant as was recently stated.

Tex., Harlingen.—Harlingen Ice & Gin Co. will enlarge plant.

Tex., McAllen.—The Ice & Light Co. incorporated with \$50,000 capital stock by A. L. Strang, C. T. Brown and George Quistead.

Tex., San Antonio.—Two Rivers Ranch Co., Wichita, Kans., will develop 44,000 acres of agricultural land (Kerr Ranch) in McMullen county; Ehrenborg & Johnson, Gibbs Bldg., San Antonio, engineers, have completed subdivision.

### IRON AND STEEL PLANTS

Md., Baltimore.—Iron and Steel Products.—Canton Iron and Steel Works (recently reported incorporated with \$100,000 capital stock) purchased Canton Iron & Steel Co.'s plant; reorganized company and will operate mills; manufacture wrought iron, ordinary refined iron bars and steel; John J. Caine, president; J. H. E. Woodman, vice-president and treasurer; William Sourleau, secretary; John C. Brown, manager.

### LAND DEVELOPMENTS

Ala., Birmingham.—Fifth Avenue Realty Co. incorporated with \$12,000 capital stock; M. P. Messer, president; Nathan L. Miller, vice-president; Richard W. Massey, secretary-treasurer.

Ark., Harrison.—Gaither Mountain Orchard Co. incorporated with \$30,000 capital stock by M. N. Sale, Charles McClure Clark and Sol S. Renco.

Fla., Jacksonville.—S. C. Woods will develop 15,000 acres of land as colony to be known as Warsaw; 40 acres to be developed as experimental farm; later contemplates acquiring 40,000 more acres for colonization.

Fla., Lakeland.—John F. Fox Realty Co. incorporated with \$15,000 capital stock; will develop property as suburban residence section; John F. Fox, president; John Patterson, vice-president; John Hines, secretary-treasurer.

Fla., Tampa.—S. A. Boyd of Spokane, Wash., is negotiating for 3000 acres of land in Hillsboro county for colonization. He is registered at Hillsboro Hotel, Tampa.

Fla., St. George's Island (not a postoffice).—Company organized with Geo. W. Sexton, president, Tallahassee, Fla.; H. C. Bliss, vice-president, St. Louis, Mo.; A. J. Smith, secretary, Atlanta, Ga.; C. B. Porter, treasurer, Rome, Ga.; will develop health and pleasure resort on St. George's Island; cultivate pecan groves, erect hotel, construct pier, install water-works, electric lights and sewerage system, erect cottages, etc.

Fla., St. Petersburg.—Tokoma Land Co. incorporated with \$250,000 capital stock by Horace G. Eastburn, J. G. Lewis and others.

Ga., Homestead (not a postoffice).—Homestead Pecan & Nursery Co., A. Clarke Snedeker, general manager, 1021 Schmulbach Bldg., Wheeling, W. Va., is interested in cultivating large tract of land in Pierce county in pecans.

Ga., Savannah.—Wilkinson & Rockwell purchased 155 acres of land near Savannah for \$7500; will subdivide into building lots and develop.

Md., Clifford Station (not a postoffice).—Charles J. Hull, 211 North Calvert St., Baltimore, Md., acquired additional property adjoining English Consul Estate and will develop as English Consul Estate Annex; will subdivide, construct roads, etc.

N. C., Aberdeen.—Marlboro Farming Co. incorporated with \$7651 capital stock by T. E. McCall and others.

Ga., Ogeechee.—Ogeechee Valley Land & Improvement Co. is being organized with \$100,000 capital stock by A. J. Brinson, C. L. Huggins, F. B. Connor, all of Oliver, Ga., and D. G. Zeigler and Orren Burke of Rocky Ford, Ga.; will improve land in Ogeechee Valley for farming, manufacturing and colonization.

N. C., Apex.—Dixie Land Co. incorporated with \$100,000 capital stock by A. B. Currin, J. B. Cunningham and C. P. Sellers.

Okla., Oklahoma City.—Oklahoma Lot & Land Co. incorporated with \$10,000 capital stock by G. O. Weems, I. F. Walls and others.

S. C., Columbia.—Rembert Development Co., recently reported organized with \$50,000 capital stock, has elected George R. Rembert president and general manager, J. H. Bollin vice-president, E. O. Black secretary, T. Hugh Melghan treasurer; will expend \$30,000 to improve 53 acres of land as residential section; improvements to include draining of lower portion, grading, construction of streets and driveways; company desires correspondence with landscape gardeners.

Tex., Bay City.—Matagorda County Orchard Development Co. incorporated with \$2500 capital stock by Robert Y. Adam of San Antonio, Tex.; W. W. Whitted of Bay City, and others.

Tex., Houston.—Union Land Co. incorporated with \$20,000 capital stock by W. C. Corbett, K. H. Polk and J. W. Woods.

Tex., Houston.—C. A. Elmer & Co. purchased 6000 acres of land and will develop; subdivide into small tracts, etc.

Tex., San Antonio.—Alameda Development Co. (recently reported incorporated with \$55,000 capital stock) is reorganization of the Wharton Company; proposes to plant 90,000 fig trees and establish 20,000 plant for preserving fruit; A. B. Storey, president; Geo. M. Clifton, vice-president; Roy W. Hearne, treasurer; W. W. Wharton, secretary and general manager.

Va., Fincastle.—Fincastle Real Estate Improvement Co. incorporated with \$2000 capital stock; W. J. Pogue, president; William McWilson, vice-president; W. M. Page, secretary-treasurer.

Va., Roanoke.—Villa Heights Corporation incorporated with \$100,000 capital stock; R. Whitley, president; John W. Woods, vice-president; R. R. Fairfax, secretary-treasurer.

W. Va., Cherry Run.—Cherry Run Orchard Co., recently reported incorporated by W. H. Somers of Berkeley Springs, W. Va., and others, purchased 200 acres of land and will develop orchard.

W. Va., Martinsburg.—Orchards.—Potomac-Shenandoah Company (recently reported incorporated with \$50,000 capital stock) purchased 200 acres of orchard land and will develop; will also operate coopeage plants, purchase fertilizers, spray materials, implements, etc.; contemplates installing modern filing and office equipment; Charles Burdette Hart, president; May Silver, vice-president; N. T. Frame, secretary; Alex. Clohan, treasurer.

W. Va., Martinsburg.—McKown Orchard Co. incorporated with \$100,000 capital stock by H. H. McKown of Inwood, W. Va.; Alex. Clohan and H. H. Rutherford of Martinsburg.

### LUMBER MANUFACTURING

Ala., Mobile.—McIntosh Bluff Lumber Co. incorporated with \$30,000 capital stock; E. F. Carriere, president; R. E. V. Le Beau, vice-president; H. C. Burton, secretary-treasurer.

Ala., Mobile.—Bay City Export Co. incorporated with \$25,000 capital stock; J. T. McKeon, president; J. M. Walsh, vice-president, both of Mobile; W. W. Cummock of Bogalusa, La., secretary.

Ark., Little Rock.—Z. F. Fox & Son, Freeport, Mich., are considering location of sawmill in Arkansas.

Ark., Trumann.—Poinsett Lumber Co. will establish sawmill and develop timber land; Vergil Norman will be general superintendent of plant.

Ark., Trumann.—Poinsett Lumber & Manufacturing Co. will erect veneer plant and sawmill to cost about \$100,000; construction begun.

Ky., Whitesburg.—White Oak Lumber Co. organized with B. E. Caudill, president; Samuel Collins, secretary; John A. Welch, treasurer; David Hays, manager; has 15,000 trees; will not at present cut timber.

La., Hammond.—East Union Lumber Co. will erect planing mill; equipment will consist of resaw, rip saw and three other machines; construction begun.

La., Mayna.—Star Lumber Co. organized with \$150,000 capital stock to establish saw, planing and shingle mill; O. S. Jones is president; Albert Klme, vice-president; C. E. Narry, treasurer, and John Burmeister, secretary and general manager.

La., Genesee.—Genesee Lumber Co., A. Loranger, president, will erect sawmill to replace burned building recently noted; ordinary construction; cost \$25,000; install new machinery; daily capacity 75,000 feet lumber.

La., Many.—Hickey Jones Lumber Co. will rebuild sawmill reported burned.

La., New Orleans.—National Realty Co., Charles Roth, president, purchased plant of L'Hote Manufacturing Co. for \$133,500; will reorganize company and manufacture sash, blinds and doors.

Miss., Yazoo City.—J. L. Hemphill contemplates purchasing dogwood and persimmon timber lands for development.

Mo., St. Louis.—Arcadia Valley Manufacturing Co. incorporated with \$25,000 capital stock by A. E. Holton of St. Louis, Julia E. Pfaff of Valley Park, Mo.; R. J. Burhen of Ironton, Mo., and others.

N. C., Robbinsville.—Whiting Manufacturing Co., Land Title Bldg., Philadelphia, Pa., and Legal Bldg., Asheville, N. C., has about 50,000 acres timber land in Graham county and has purchased county-seat of Robbinsville with exception of courthouse and some church property; expects to construct three-band sawmill, drykilns, planing mill and hardwood flooring plant. (Mentioned last week as increasing capital stock from \$1,000,000 to \$5,000,000, etc.)

Tex., Camden.—W. T. Carter & Bro. (sales offices, Houston, Tex.) awarded contract for construction of sawmill to replace burned plant; concrete and steel; entire concrete foundation; concrete floors on both working and lower floors; main building 64x208 feet, equipped with two single cutting band mills and large gang saw, with necessary rolls, transfers and other steam appliances; brick and steel power plant equipped with high-pressure 800-horse-power boilers, which, with engines to be installed, will develop 600 horse power; awarded contract to Carnegie Steel Co. of Pittsburgh, Pa., for steel work, and to Lufkin (Tex.) Foundry & Machine Co. for machinery; daily output 200,000 feet of lumber. (Recently noted.)

## MINING

Ala., Bluffton.—Iron.—Alaga Mining, Power & Development Co. of Birmingham, Ala., contemplates expending \$30,000 to \$40,000 for installation of washers, tipplers, steam shovels and other equipment, to increase capacity to 700 to 800 tons per month. (Lately noted. See "Machinery Wanted.")

Ark., Maumee.—Lead and Zinc.—Buckhorn Mining Co. incorporated with \$50,000 capital stock by Joseph Barume, F. P. Graves, Ed Zimmerman and Peter Verhoeff.

Ark., Helena.—Lead and Zinc.—Yellow Jacket Mining Co. purchased Philadelphia mine; will erect concentrating plant and develop.

Ark., Imboden.—Rock.—Julius Haugk of Decatur, Ind., purchased rock quarry of Arkansas Stone & Iron Co.; will expend several thousand dollars for improvements to quarry and crusher, increasing daily output to 100 cars crushed stone.

Ark., Lawrence.—Lead and Zinc.—J. R. Barnett of Imboden, Ark., is interested in further development of lead and zinc deposits in Lawrence county.

Fla., Jamieson.—Phosphate.—The Floridin Company, Warren, Pa., will make extensive improvements to phosphate plant; has begun work.

Fla., Quincy.—Phosphate.—The Floridin Company, Warren, Pa., will make extensive improvements to phosphate plant; has begun work.

Ky., Bowling Green.—Stone.—Kentucky & Tennessee Stone Co. incorporated with \$15,000 capital stock by F. J. Fuller, Graham MacFarlane and R. C. P. Thomas.

Mo., Galena.—Lead and Zinc.—Beacon Mining Co. organized; H. E. Houghton, president; Edward F. Ackley, vice-president; Franklin Playter, treasurer; will operate 80 acres of land of Southside Mining & Milling Co.; proposes to sublease upper levels and develop lower runs; will install pumps, etc.

Mo., Granby.—Lead and Zinc.—Granby Mining & Smelting Co., Third National Bank Bldg., St. Louis, Mo., will develop about 10,000 acres of land; daily output, 50 tons of lead and zinc. (Lately mentioned.)

Mo., Joplin.—Lead and Zinc.—Jim D. Mining Co. incorporated with \$10,000 capital stock by H. G. Gasyon, J. R. Davis and J. W. Freeman.

Mo., Joplin.—Lead and Zinc.—The Ho Min-

ing Co. incorporated with \$24,000 capital stock by L. P. Cunningham, C. E. Yates, Carl Weiner and others.

Mo., Joplin.—Lead and Zinc.—Ontario Mining Co. will erect 400-ton concentrating plant; construction begun.

Mo., Joplin.—Lead and Zinc.—Falls City Lead & Zinc Co., E. H. Watson, president, Lexington, Ky., awarded contract for erection of 400-ton concentrating mill on former Black Cat lease containing 25 acres of Glover land; jig cells 36x48 inches; will utilize seven-cell cleaners, air compressors, holsters and pumps operated by steam.

Mo., Joplin.—Lead and Zinc.—Progressive Mining Co. incorporated with \$18,000 capital stock by Adam Scott, Arthur D. Scott and others.

Mo., Webb City.—Lead and Zinc.—American-Canadian Consolidated Metals Co. incorporated with \$10,000 capital stock by Robert Tontz, D. C. Mallory and others.

Tenn., Watauga.—Limestone.—J. W. Wallace will develop limestone deposits.

Tex., Shafter.—Silver.—Silver Hill Milling & Mining Co. is name of company to be incorporated with \$50,000 capital stock; develop 640 acres of land; install 50-ton cyanide plant with output of 50 tons per 24 hours; R. K. Colquitt, president; Thomas Crosson, vice-president; H. B. Young, secretary-treasurer. (Recently noted.)

Va., Norfolk.—Sand and Gravel.—Norfolk Sand & Gravel Co. incorporated with \$150,000 capital stock; J. T. Bolton, president; C. W. Roper, vice-president; W. B. Roper, secretary-treasurer.

## MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Wharf.—City wharf committee, Arthur E. Stiles, chairman, will recommend to City Council bulkheading of city wharf from St. Anthony to St. Francis St.; improvement will consist in driving 45-foot pilings at wharf front and laying 10-foot plank wharf; old wharfing to be removed and river property filled to level with plank wharf by company receiving contract for dredging; committee will recommend dredging contract be awarded to Home Dredging Co. of Mobile; billing includes St. Francis St. slip; estimated cost, \$12,000.

Fla., Jacksonville.—Hillsboro Dredging Co. of Tampa, Fla., is lowest bidder at 13.75 cents per cubic yard for certain dredging in channel from Clearwater Harbor to Tampa Bay; Capt. George R. Spalding is U. S. engineer in charge. (Further facts recently mentioned.)

Fla., Palatka.—Wharf.—Palatka Athletic Association has plans by R. F. Ensley for wharf and clubhouse.

Kentucky.—Tunnels.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will construct nine tunnels along 80-mile extension of railroad for Lexington & Eastern Railway into coal fields of Eastern and Southeastern Kentucky.

La., Shreveport.—Levee Work.—Commissioners of Caddo Levee District will construct levee work in Caddo parish on Red River right bank: Upper Rush Point Levee, contents 35,000 cubic yards; Bealrd Levee, contents 12,000 cubic yards; Robson Levee, contents 30,000 cubic yards; will receive bids until November 1; further information may be obtained at office of State Board of Engineers, New Courthouse Bldg., New Orleans, La., or of Levee Board at Shreveport. (See "Machinery Wanted.")

N. C., Wilmington.—Dredging.—Earl I. Brown, Captain, Engineers, U. S. Engineer Office, invites bids until November 12 for dredging Smith's Creek harbor at Morehead City and harbor at Beaufort; work at Morehead City consists of deepening existing channel to depth of 10 feet at mean low water, with width of 100 feet for 2800 feet of its length and width of 200 feet for 1000 feet; existing depth varies from 2.2 feet to 7.6 feet; estimated that 152,000 cubic yards of material is to be removed; work at Beaufort consists of deepening present channel to depth of 10 feet at mean low water, with width of 60 feet; minimum depth of existing channel 3.5 feet; in length of area to be dredged (about 3.6 miles) depth of over 10 feet exists for distance of about four-fifths of a mile, where no dredging will be required; width of existing channel varies from 100 to 300 feet; amount of material to be removed estimated at 221,480 cubic yards; if any funds remain unexpended upon completion of work, this balance will be used in constructing turning basin in front of Beaufort. (See "Machinery Wanted.")

N. C., Wilmington.—Dredging.—Bowers Southern Dredging Co., Galveston, Tex., is lowest bidder at \$143.85 for dredging 1,810,000 cubic yards of earth from Cape Fear River; this is part of Government's plan for ultimate depth of 30 feet of water in Cape Fear River

and bar. Earl L. Brown, Captain, Corps of Engineers, U. S. Engineer Office.

Tex., Allenfarm.—Levee.—Brazos County Improvement District No. 1, W. W. Loftin, chairman, Commissioners, will construct about four miles of levee and complete about eight miles of levee partially constructed; bids will be received until November 5; T. R. Ratte, Jr., improvement engineer, 806 Stewart Bldg., Houston, Tex. (See "Machinery Wanted.")

Tex., Aransas Pass.—Jetty Work.—David M. Picton, Galveston, Tex., is lowest bidder for jetty improvements; \$70,000 is available for repairs to north jetty and \$40,000 for completion of south jetty, distance of 900 feet; about 22,000 tons of rock will be used for north jetty and 12,700 tons for south jetty; G. P. Howell, Major, Engineers.

Tex., Galveston.—Pier.—Southern Pacific Terminal Co. will rebuild Pier C, recently reported burned at loss of \$120,000.

Tex., Houston.—Channel.—Harris county will vote in December on organization of Harris County-Houston Ship Channel Navigation District and issuance of \$1,250,000 of bonds to aid Government in completing channel to depth of 25 feet from Gulf to Port Houston. Address County Commissioners.

Tex., Texas City.—Dredging.—Atlantic, Gulf & Pacific Company, New York, has contract for improvement of Texas City channel, extending from Bolivar Roads distance of about 17 miles to Texas City; work is divided into three sections as follows: First section, upper end of channel at Texas City will be extended distance of 687 feet along harbor front, where average depth of water is now 2.7 feet; proposed dimensions of new channel to be 27 feet deep and 200 feet bottom width; second section, present channel from Station 0 at Texas City to Station 5 (distance of 5000 feet) will be widened from 100 to 200 feet on bottom and deepened from about 19 feet to 27 feet; third section, present channel from Station 5 to Station 22 (distance of 17,000 feet) will be deepened from average depth of 22 feet to 27 feet; total estimated quantity of material to be removed is 1,153,500 cubic yards place measurement, divided as follows: First section, 121,000 cubic yards; second section, 585,000 cubic yards; third section, 446,500 cubic yards; contract price, 11 1/2 cents per yard on first section, 10 cents on second and 8 1/2 cents on third; upon this basis, cost amounts to \$107,275.50; about \$100,000 is available; Major George P. Howell, U. S. Engineer in charge of Galveston District. (Recently mentioned.)

Va., Richmond.—Bulkhead Wharf.—James River Improvement Committee will receive bids until November 1 for specifications, plans and detail drawings for construction of concrete bulkhead wharf recently noted; Charles E. Bolling, City Engineer. (See "Machinery Wanted.")

W. Va., Wheeling.—Retaining Wall.—City awarded contract to Jacovetti & Keohline, Wheeling, for construction of retaining wall on Lind St., recently noted; wall to contain about 550 yards of concrete masonry; cost \$3800; Charles B. Cooke, City Engineer.

## MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Gardens.—Richard W. Massey has plans by Wm. Leslie Welton, Empire Bldg., Birmingham, for Italian gardens, consisting of concrete, brick and terracotta walls and balustrades, marble fountains, brick pavements and garden pottery; cost \$5000.

Ala., Birmingham.—Park.—Rhodes Park Improvement Committee, Wm. M. Walker, chairman, awarded contract to Richard Blackburn (address, care of Park Committee) for construction of brick balustrades, pavement, concrete walks and steps; cost \$5000; plans by Wm. Leslie Welton, Empire Bldg., Birmingham.

Ala., Courtland.—Charles D. Lane of Huntsville, Ala., is organizing company to publish weekly newspaper.

Ark., Helena.—Laundry.—Helena Laundry Co. incorporated with \$7500 capital stock by R. F. Hubert, Jr., R. E. Martin and J. A. Cash.

Fla., Jacksonville.—Steamship Line.—Inter-Ocean Steamship Co. incorporated with \$50,000 capital stock; Edward F. Evans, president; R. W. Mattox, vice-president; T. S. Evans, treasurer; A. M. Evans, secretary.

Fla., Jacksonville.—Garage.—O. P. Woodcock has contract to erect garage on Riverside Ave.

Ga., Griffin.—Water, Heat and Light Plant Installations.—Griffin Water, Light & Heating Co. organized with \$10,000 capital stock by L. A. Bellonby of Jonesboro, Ga., and others; will contract to install heating, water and lighting plants.

Ky., Hopkinsville.—Garage.—Ideal Motor Car Co., recently reported incorporated with

\$10,000 capital stock, awarded contract to Davis & Oldham (address, care of company) for erection of garage; 43x135 feet; ordinary construction; plans by Lee Oldham (address, care of company); Chas. S. Jackson, president; Samuel Frankel, secretary.

Ky., Paducah.—Garage.—D. G. Murrell will erect brick garage to be occupied by Knowles Bros.; 135x87 feet; steam heat; cost \$4000; plans by B. F. Davis, Paducah; contract awarded to M. H. Weckle, Paducah.

Ky., Paducah.—Printing.—Paducah Printing Co. incorporated with \$30,000 capital stock by Al E. Young, B. M. Philipe and Frank Young.

La., New Orleans.—Grain Elevator.—Mississippi Valley Transportation Co. will erect grain elevator and round storage bins; fire-proof; steel and concrete.

Md., Baltimore.—Mineral Water.—Cloverdale Water Co. incorporated with \$20,000 capital stock by Benjamin W. Parsons, 13 North Carey St., and others.

Md., Towson.—Contracting.—Peters & Harding Contracting and Building Co. incorporated with \$5000 capital stock by Daniel Harding, Jacob Peters and Howard Collins.

Mo., Cape Girardeau.—Automobiles.—South-east Missouri Motor Car Co. incorporated with \$15,000 capital stock by E. M. Rowe, J. W. Phillips, George McBride and others.

Mo., St. Louis.—Automobiles.—Superior Motor Sales Co. incorporated with \$75,000 capital stock by Oliver L. Garrison, Oliver L. Garrison, Jr., both of St. Louis, and Murray M. Baker of Peoria, Ill.

Mo., St. Louis.—Automobiles.—Mt. Washington Automobile Co. incorporated with \$10,000 capital stock by Anthony Collier, Adolph Simon, Arthur Sontag and Chas. J. Schneider.

Mo., St. Louis.—Laundry.—B. M. Rasmussen will erect store and laundry building; cost \$20,000.

Mo., St. Louis.—Construction.—E. L. Hayes Construction Co. incorporated with \$2000 capital stock by Lloyd S. Plowman, Leata Plowman and Robert C. Towers.

N. C., Charlotte.—Publishing.—Southern Real Estate, Loan & Trust Co. will erect building to be occupied by Western Newspaper Union.

N. C., Henderson.—Garage.—C. H. Turner awarded contract to J. J. Betsch, Henderson, for brick work on garage; 44x30 feet; two stories; red pressed-brick front.

N. C., Reidsville.—Publishing.—Webster's Weekly incorporated with \$2500 capital stock by S. W. Cotton, W. B. Milliner and others.

Okla., Cherokee.—Laundry.—Southwestern Laundry Co., recently reported incorporated with \$5000 capital stock, will erect 50x70 fire-proof building; date of opening bids not set; machinery mainly purchased; B. E. Merrill, president; Viola L. Kuhn, vice-president; H. D. Kuhn, secretary-treasurer and manager.

Okla., Gage.—Publishing.—Gage Record Publishing Co. incorporated with \$2000 capital stock by W. F. Munsey, G. E. Davison and E. C. Sherman.

Tenn., Nashville.—Grain.—Gillette Grain Co. incorporated with \$10,000 capital stock by F. E. Gillette, Jr., W. P. Bearden, J. W. Jefferson, G. A. Harrington and W. P. Nicholson.

Tex., Dallas.—Construction.—Southern Construction Co. incorporated with \$5000 capital stock by Fred Yeager, J. F. Colbath and A. G. Gardner.

Tex., San Antonio.—Printing.—San Antonio Printing Co. increased capital stock from \$10,000 to \$40,000.

Tex., Victoria.—Laundry.—W. N. Fleming and W. H. Smith awarded contract at \$4350 to Bailey-Mills Company, Victoria, for erection of two-story brick building to be occupied by Victoria Steam Laundry.

Va., Hillsville.—Publishing.—People's Advocate incorporated with \$5000 capital stock; C. M. Marshall, president, of Mayberry, Va.; C. C. Worrell, vice-president; D. B. Brown, secretary-treasurer, both of Hillsville; will publish newspaper.

## MISCELLANEOUS FACTORIES

Ala., Birmingham.—Soap.—Birmingham Soap Manufacturing Co., D. R. Caldwell, president, 501 Brown-Marx Bldg., will erect building and install machinery for manufacture of soap; capacity, 2500 cases of soap.

Ala., Gadsden.—Shovels.—Southern Shovel Manufacturing Co., S. Marks, secretary, will make repairs, additions, etc., to plant; ready for operation before January 1.

Ala., Mobile.—Creamery.—Clover Creamery Co. incorporated with \$10,000 capital stock by Hardaway Young, J. M. Diehl and J. J. Young.

Ala., Mobile.—Automobile Tires.—Blotch



Bros. of Blenville Automobile Co. are interested in establishment of plant to manufacture patented automobile and bicycle tires filled with composition, instead of air.

Ala., Thorsby.—Northrop Manufacturing & Supply Co. incorporated with \$20,000 capital stock by C. E. Northrop, C. E. Northrop, Jr., D. M. Smith and others.

Ark., Little Rock—Office Equipment.—Office Appliance Co. incorporated with \$10,000 capital stock by Geo. O. McLean, P. W. McLean, E. F. Valentine and George McLean.

Ark., Little Rock—Wax.—Reata Candella Wax Co. incorporated with \$50,000 capital stock by C. P. Harnwell, Thomas Macklerman, T. B. Askew and others.

Ark., Little Rock—Macaroni.—Geo. L. Jones is interested in establishment of macaroni factory.

Ark., Pine Bluff—Rice Mill.—Z. Orto, president of Simmons National Bank, is promoting establishment of rice mill.

Fla., Jacksonville—Bags.—American Agricultural & Chemical Co., main office, New York, will establish bag factory. (See "Fertilizer Factories.")

Fla., Starke—Cigars.—Starke Cigar Mfg. Co. organized by Geo. L. Massey and A. P. Hoffman; establish factory at Jackson and Thompson Sts.

Ga., Rome—Medicine.—Rome Medicine Co. incorporated with \$100,000 capital stock by D. T. McCall, I. F. Vickery, J. S. Daniel and others.

Ky., Covington—Gas Appliances.—Gas Appliance Co. incorporated with \$500 capital stock by Adolph Premorol, Joseph Huck and J. H. Hutchins.

Ky., Louisville—Bakery.—New York Baking Co. increased capital stock from \$30,000 to \$50,000.

Ky., Louisville—Ice Creepers.—United States Horseshoe Ice Creeper Co. incorporated with \$50,000 capital stock by Isaac R. Whisler, Conrad Vogel, both of Louisville, and M. Clark of Paris, Tex.

Ky., Louisville—Chemicals.—Trenton Company, 84 Kenyon Bldg., recently reported incorporated, will install chemical laboratory machinery to manufacture bitters, etc.; at present will occupy rented building; next spring will erect laboratory; install machinery as needed; Clarence A. Beck, vice-president, 1014 First National Bank Bldg., Chicago, Ill., may be addressed as to machinery bids; John G. Clem, president; M. A. Clem, secretary-treasurer; E. L. Thackes, manager.

La., Mansura.—A. Drouin & Co. is promoting organization of company (recently reported) with \$350,000 capital stock to establish 1500-ton sugar plant; endeavoring to interest Eastern capitalists.

La., New Orleans—Automatic Scales.—Tolledo Automatic Scale Co. incorporated with \$25,000 capital stock by James A. Kathman, Charles J. Derbes, J. L. Davis and others.

La., New Orleans—Sugar.—Destrehan Planting & Mfg. Co., Ltd., incorporated with \$100,000 capital stock by T. L. Macon, president and ex-officio treasurer; G. Z. Macon, vice-president; P. S. Schneidau, secretary.

La., Winnfield—Salt.—Face Oil Co. will install evaporating plant at gas well to manufacture salt from black hot sulphur water; capacity 500 pounds daily.

Md., Baltimore—Brewery.—Gottlieb-Bauernschmidt-Strauss Brewing Co. has plans by and awarded contract to J. Benzel, Jr., 1734 North Chester St., Baltimore, for erection of two brick buildings at Oliver and Chester Sts.; cost \$5500.

Miss., Hattiesburg—Turpentine.—C. D. Thaggard of McNeill, Miss., and D. D. Durham of Poplarville, Miss., secured turpentine rights on 5000 acres of pine lands and will erect still and cup trees.

Mo., Columbia—Shoes.—W. T. Stephenson contemplates establishment of shoe factory.

Mo., Hannibal—Finola.—Finola Manufacturing Co. incorporated with \$150,000 capital stock by Walter S. Fennell, J. C. Helm and W. T. League.

Mo., Shelby—Screens.—Starrett Screen Co. incorporated with \$15,000 capital stock by R. L. Starrett, J. T. Doyle and Ruby Starrett.

Mo., St. Louis—Arcadia Valley Manufacturing Co. incorporated with \$25,000 capital stock by Frank R. Holten, R. J. Burheim and others.

Mo., St. Louis—Bottles.—Northwest Bottle Co. incorporated with \$15,000 capital stock by Jacob Fishman, Samuel Kranzberg and others.

Mo., St. Louis—Implements.—Parlin-Oendoff Machine Co. has plans by A. B. Groves, St. Louis, for plant; six stories; fireproof; exterior faced with red brick; mottled terracotta trimmings; reinforced concrete frame

and floors; brick curtain walls; driveway in portion of first floor.

Mo., St. Louis—Welding Equipment.—Universal Welding Equipment Co. incorporated with \$6000 capital stock by Ralph W. Parker, Ferdinand Lieber and Gustav Cramer.

Mo., St. Louis—Hardware.—J. F. Schaberg Hardware Co. incorporated with \$10,000 capital stock by J. F. Schaberg, Sr., J. F. Schaberg, Jr., and others.

N. C., Asheville—Piano Players, etc.—Asheville Piano Co. (recently reported incorporated) organized with Charles Nichols president and general manager, Mark Brown vice-president, W. J. Kincaid secretary-treasurer; leased space in Marshall Bldg. and will manufacture J. W. Davis piano player, etc.

N. C., Asheville—Gloves, Rompers, etc.—American Cotton Goods Co. of Owaso, Mich., will establish plant to manufacture canvas gloves, children's rompers, play suits, etc.

N. C., Shelby—Shirts and Overalls.—Mrs. Evans E. McBrayer contemplates, it is reported, establishment of shirt and overall factory.

Okl., Oklahoma City—Fire Apparatus and Supplies.—Oklahoma Fire Apparatus & Supply Co. incorporated with \$10,000 capital stock by E. A. Burroughs, Ralph W. Day and Oliver C. Black.

Okl., Tulsa—Railway Device.—L. J. F. Rooney of Tulsa and Charles T. Driggs of Erie, Pa., contemplate forming company to manufacture device for stopping railway trains.

S. C., Greenville—Automobiles.—Mountain City Foundry and Machine Works will manufacture 30-horse-power runabout automobiles.

S. C., Spartanburg—Iron Tablets.—Mountain Iron Mineral Co. increased capital stock from \$10,000 to \$25,000.

Tenn., Portland—Beverages.—Coca-Cola Bottling Works incorporated with \$6000 capital stock by B. F. Thomas, L. C. Orr, George T. Hunter and others.

Tenn., Sevierville—Brooms.—R. D. Marshall and others are reported as contemplating erection of broom factory.

Tenn., Nashville—Gas Plant.—City will vote November 8 on granting 50-year franchise to C. H. Geist Company to establish gas plant.

Tex., Amarillo—Ice-cream.—Ayers Ice-cream Co. increased capital stock from \$16,000 to \$25,000.

Tex., Dallas—Stationery.—Kalamazoo (Mich.) Stationery Co. is reported as contemplating establishment of plant to manufacture stationery, etc.

Tex., Fort Worth—Overalls.—American Overall Co., 113-15 South Boaz St., purchased Fort Worth overall factory; will increase capital stock to \$55,000 and operate under name of Fort Worth-American Overall Co.

Tex., Quannah.—Panhandle Broom Manufacturing Co., H. A. Gray, manager, contemplates enlarging capacity of plant; present daily capacity, 24 to 30 dozen brooms (not 24 brooms as recently stated).

Tex., San Antonio—Marble and Granite Works.—San Antonio Marble & Granite Works Co. incorporated with \$2500 capital stock by C. H. Moeller and others.

Tex., Stephenville—Creamery.—Stephenville Creamery Co. is being organized; F. H. Chandler, president; W. H. Frey, vice-president; John Cage, secretary; John Clark, treasurer.

Tex., Sugarland—Paper.—Sealy Mattress Co. of Houston, Tex., will take over and operate paper mill; expend \$30,000 for erection of plant to manufacture wrapping paper from cane pulp; later contemplates manufacture of news paper; construction begun.

Tex., Weatherford—Brooms.—Gibbs & Graff are operating broom factory recently noted.

Va., Danville—Medicine.—Milam Medicine Co. incorporated with \$250,000 capital stock; B. K. Jones, president; W. E. Griggs, 1st vice-president; W. B. Hill, 2d vice-president; J. H. Harrison, secretary-treasurer.

Va., Emporia—Peanuts.—Company organized with E. A. Hartley president, Mortimer Williams vice-president, both of Petersburg, Va.; W. R. Cato secretary, James Briggs manager, both of Emporia; will establish peanut-cleaning factory; cost \$15,000.

Va., Newport News—Trousers.—Southern Pants Manufacturing Co. incorporated with \$50,000 capital stock; F. B. Longan, president; I. M. Goldberg, vice-president; R. C. Petzold, secretary-treasurer.

Va., Norfolk—Distillery.—Hill Distillery Co. incorporated with \$10,000 capital stock; F. A. Beard, president; S. S. Cox, vice-president; L. C. Cox, secretary-treasurer.

Va., Richmond—Automobiles.—Richmond Iron Works Corporation, recently noted to have purchased property of Richmond Iron Works for \$65,000, is proceeding with remodeling of plant; equipment and material mainly purchased; daily capacity, one motor car.

Va., Petersburg—Cigarettes.—British-American Tobacco Co., general offices, 111 Fifth Ave., New York, is reported to establish cigarette factory.

Va., Suffolk—Trousers, Overalls, etc.—Suffolk Manufacturing Co. (recently reported incorporated with J. B. Norfleet president) will erect brick building and equip for manufacturing overalls, trousers, etc.

W. Va., Parkersburg—Auto Motor Castings. Auto Moto Casting Co. of Chagrin Falls, O., is reported to be considering establishment of plant.

W. Va., Sutton—Dyers' Extracts, etc.—W. P. Stine of Charleston, W. Va., will build tanners and dyers' extract plant; reported cost, \$500,000.

W. Va., Wheeling—Glass Tumblers.—Board of Trade is interested in organization of company with \$100,000 capital stock to establish plant to manufacture tumblers by patented continuous tank process.

## RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, SHEDS, ETC.

N. C., Newton—Carolina & Northwestern Railway, L. T. Nichols, general manager, Chester, S. C., will, it is reported, erect shops.

Okl., Altus—Kansas City, Mexico & Orient Railway, W. W. Colpitts, chief engineer, Kansas City, Mo., will, it is reported, construct roundhouse; brick; seven stalls; cost \$14,000.

## ROAD AND STREET WORK

Ala., Mobile.—Mobile county will vote on issuance of \$500,000 of bonds for road construction. Address County Commissioners.

Ark., Little Rock.—City Council adopted ordinance appropriating \$13,500 for paving intersections of all streets crossing West 23d St. from Main to Wolfe St. in Improvement District No. 157; also \$21,000 for paving streets and constructing storm sewers in Improvement District No. 145; George A. Stratman, Mayor; George A. Counts, City Clerk.

Fla., Miami.—City Council will expend \$100,000 for improvements, including paving. Address The Mayor.

Fla., Palatka.—City will pave several of principal lateral streets in business section with vitrified brick, with granite curbing or concrete curb and gutter. Address The Mayor.

Ga., Rome.—City postponed date of election from November 8 to December 6 for voting on issuance of \$50,000 of bonds for paving and other street improvements. Address The Mayor. (Recently mentioned.)

Ky., Lexington.—Joint Improvement Committee of City Council recommended award of contract to C. C. Miller & Co. of Lexington for construction of macadam streets, concrete curbing and guttering on Bryan, Kentucky, College View, Lexington, Ashland, Kentucky, Clay and Oldham Aves.; P. P. O'Neill, City Engineer. (Recently mentioned.)

La., Alexandria.—City awarded contract to Gally & Clark, Alexandria, for paving as follows: At \$2.35 per yard for 5800 yards of bitulithic pavements on five-inch concrete base; at \$2.85 per yard for 4800 yards of brick pavement on five-inch concrete base; at \$2.75 per yard for 1900 yards of brick pavement on five-inch concrete base; 95 cents per yard for 16,000 yards of gravel pavement rolled down with temple roller in two separate courses; at 66 cents per foot for 16,000 linear feet of curb and gutter; total amount of contract, \$60,000; I. W. Sylvester of Alexandria, engineer in charge. (Lately noted.)

La., Crowley.—City will construct 33,000 square feet concrete street crossings; bids to be received until November 23; R. J. Boudreaux, City Clerk. (See "Machinery Wanted.")

La., New Orleans—Louisiana Railway & Navigation Co. will construct one block of pavement; 280 feet long, 30 feet wide; other details not available at present. (Recently noted.)

Md., Easton.—City plans expenditure of \$65,000 for street paving and construction of sewer system; Martin M. Higgins, Mayor.

Miss., Vicksburg.—Warren county will widen and grade Pender Hill; bids received until November 7; J. D. Laughlin, Chancery Clerk. (See "Machinery Wanted.")

Okl., Tulsa.—T. C. Hughes, City Engineer, prepared plans and specifications for 7 to 10 miles of cement sidewalks; estimated cost, \$20,000 to \$25,000.

Tenn., Nashville.—Road Board will grade road 6226 feet long, beginning at Lickton, in Twenty-second Road District, and extending to Wilkerson Rd.; bids will be received until October 29; W. M. Pollard, county judge; J. H. Lee, road commissioner Twenty-second Road District. (See "Machinery Wanted.")

Tenn., Rogersville.—Hawkins County Commissioners, J. R. Sanders, secretary, opened bids October 17 for construction of 10,000 cubic yards macadam roadway. (Recently mentioned.)

Tex., Anson.—Jones county will vote on issuance of \$125,000 of bonds for road improvements. Address County Commissioners.

Tex., Bellville.—Precinct No. 1 of Austin county voted \$25,000 bond issue for road construction. Address Precinct Commissioners. (Recently mentioned.)

Tex., Galveston.—City will relay brick pavement on Tremont St. from Ave. P<sup>1</sup>/<sub>2</sub> to county's right of way; bids opened October 20; A. T. Dickey, City Engineer; V. E. Austin, Commissioner of Streets and Public Property.

Tex., Greenville.—City will construct concrete sidewalks on Main St., 160 feet; Trowbridge St., 110 feet; Cherry St., 65 feet; bids opened October 13. Address The Mayor.

Tex., Haskell.—Haskell county will vote November 8 on issuance of \$100,000 of bonds for road construction. Address County Commissioners.

Tex., Rising Star.—City voted \$10,000 bond issue for street improvements. Address The Mayor.

Tex., Victoria.—Victoria county is considering issuance of from \$300,000 to \$500,000 of bonds for road construction. Address County Commissioners.

Va., Front Royal.—Front Royal district will vote November 8 on \$30,000 bond issue for construction of road recently noted.

Va., Front Royal.—Warren county will vote November 8 on issuance of \$30,000 of bonds for construction of road in Front Royal district. Address County Commissioners.

Va., Jonesville.—Lee county will vote November 29 on issuance of \$350,000 of bonds for road construction. Address County Commissioners.

Va., Lexington.—City awarded contract to S. B. Bellington of Lynchburg, Va., for construction of tar-macadam streets.

Va., Portsmouth.—City will construct 71,350 square yards pavement, 32,544 linear feet of all-granite curb, or 28,196 linear feet to be concrete combined curb and gutter and 4348 linear feet to be concrete curb; bids will be received until October 31; E. B. Hawks, chairman street committee; V. O. Cassell, Jr., City Engineer. (See "Machinery Wanted.")

Va., Wise.—Wise county will vote November 28 on issuance of \$700,000 of bonds for road construction. Address County Commissioners.

Va., Pulaski.—Warden, Hottell & Hailey have contract to construct two miles of Dora Rd. in Pulaski District; P. St. J. Wilson, State Highway Commissioner, Richmond, Va.

W. Va., Parkersburg.—City will pave Market St.; bids will be received until October 27; Frank Good, auditor. (See "Machinery Wanted.")

W. Va., Parkersburg.—City will pave Market St. from 13th to 16th St.; C. P. Morrison, president Board of Affairs; material to be used, brick; amount available, \$5000; bids opened October 27; Ben Stewart, City Engineer. (See "Machinery Wanted.")

W. Va., Wheeling.—City awarded contract to W. H. Cochran & Co. for sidewalk and curbing along streets leading to main entrance to Bethany College, and to R. B. McCullough for paving; both contractors of Wheeling.

## SEWER CONSTRUCTION

Ala., Cullman.—City is considering construction of sewer system; M. L. Robertson, Mayor.

Ark., Little Rock.—City will construct storm sewers in Improvement District No. 145; George A. Stratman, Mayor. (See "Road and Street Work.")

Fla., Bartow.—City awarded contract to J. M. Minnis to construct storm sewer to drain hollow at intersection of Main St. and Hendry Ave.

Fla., St. George's Island (not a postoffice). Company organized with George W. Saxon, president, Tallahassee, Fla.; will construct

sanitary sewer system. (See "Land Developments.")

Ga., Rome.—City postponed date of bond election from November 8 to December 6 for voting on issuance of \$50,000 of bonds for extension of sewer system. Address The Mayor. (Recently mentioned.)

Md., Easton.—City plans expenditure of \$65,000 for sewer construction and street paving; Martin M. Higgins, Mayor.

Mo., Dexter.—City defeated \$20,000 bond issue for sewer construction. Address The Mayor.

W. Va., Moundsville.—City has voted on issuance of \$166,900 of bonds for construction of sewer system. Address The Mayor.

N. C., Smithfield.—City will construct sewer system; bids will be received until November 1; James A. Wellons, Mayor. (See "Machinery Wanted.")

Okl., Checotah.—City contemplates installation of sanitary sewer system to cost \$40,000. Address The Mayor.

Okl., Muskogee.—City has surveys made for proposed intercepting sewer to convey sewage to Arkansas River; L. B. Kinsey, City Engineer.

Okl., Guthrie.—City awarded contract to W. E. Power to construct storm sewer in District No. 5.

Tenn., Chattanooga.—Board of Public Works awarded contract to I. H. Mishler, 319 McCallie Ave., Chattanooga, to construct sewer on McCallie Ave., between Hawthorne St. and Highland Park Ave.; contract price \$4013.

Tex., Fort Crockett (not a postoffice).—Government awarded contract to Kelso & Vautrin, Galveston, Tex., at \$16,950 to construct sewer system.

Tex., Plano.—City has available about \$17,000 for sewer system recently noted; plans by F. H. Lancashire, Dallas, Tex.; work will begin at once; G. Hudson, City Secretary.

Tex., Terrell.—City will vote November 10 on issuance of \$300 of bonds for construction of sewer system and for improvements at Central High School building. Address The Mayor.

Va., Front Royal.—City contemplates constructing sewer system; A. F. Brown, State engineer, has been engaged as consulting engineer.

Va., Richmond.—City Council approved plans of Charles E. Bolling, City Engineer, for four new sewers to be branches of West End trunk sewer, and authorized street committee to advertise for bids for construction; sewers are: In Lombardy and other streets, to cost about \$35,500; Sycamore and other streets, to cost \$38,488; Meadow and other streets, to cost \$429,689; Hampton and other streets, to cost \$68,138; also authorized sewer in 21st St., to cost \$1190; contract was awarded to J. B. Chewing to construct sewer in East Leigh St. to east of 31th St., and to Government Rd. through Miles Ravine at estimated cost of \$11,475; also awarded contract to H. L. Driscoll for several small sewers in East End, to cost \$7536.

Tex., San Angelo.—San Angelo Sewer Co., C. C. Kirkpatrick, president, has retained F. H. Lancashire, Dallas, Tex., to report on plans for extending and improving sewerage purification plant.

W. Va., Parkersburg.—Board of Affairs, C. P. Morrison, president, awarded contract to John W. Curry at \$241.50 to construct sanitary sewers on Teft, Charles and Latrobe Sts.

W. Va., Parkersburg.—City will construct 21-inch storm sewer to relieve conditions existing in City Park, together with necessary catch-basins, manholes and connection; bids will be received until October 25; Frank Good, auditor. (See "Machinery Wanted.")

## TELEPHONE SYSTEMS

Ark., Jonesboro.—Home Telephone Co. (recently noted to issue \$30,000 of bonds) will extend system from Jonesboro to Marked Tree, giving through service to Memphis, Tenn.

Fla., West Palm Beach.—West Palm Beach Telephone Co., M. E. Gruber, manager, will expend \$9000 to make improvements to telephone system recently noted purchased; contemplate construction of about 40 miles of line connecting West Palm Beach, Boynton, Delray, Fort Lauderdale, Miami and intermediate points; at present will make repairs to plant; capital stock \$25,000.

Mo., Plattsburg.—Home Telephone Co. of St. Joseph, Mo., has franchise to establish common battery telephone system.

N. C., Friendship.—Friendship Telephone Co., incorporated with \$5000 capital stock by Thomas Wakefield and others.

Okl., Big Cabin.—Big Cabin Telephone Co.

incorporated with \$5000 capital stock by J. R. Stevenson, John Cearley and W. E. Bell.

Tenn., Doyle Station.—Doyle Telephone Co., incorporated with \$2500 capital stock by R. E. L. Smith, Powell K. Lewis, Alonzo P. Johnson and others.

Tenn., Olive Springs.—Olive Springs Telegraph & Telephone Co., incorporated by J. C. Edwards, Thomas England, J. H. Simpson and others.

Tex., Amarillo.—Southwestern Telephone & Telegraph Co., J. E. Farnsworth, manager, Dallas, Tex., is arranging to construct long-distance telephone lines to connect with Colorado company's lines into Denver and intermediate points; is stringing heavy copper wire between Amarillo and Tucumcari, N. M.; will connect Fort Worth, Tex., with Denver, Colo., by way of Amarillo; later construct copper line to Texico, one along Rock Island Railroad to Oklahoma points, and another along Santa Fe to Canadian, Oklahoma and Kansas points.

## TEXTILE MILLS

Ala., Huntsville.—Duck, etc.—Abingdon Mills will, it is reported, add new spindles; now has 17,500 ring spindles, 508 looms, etc.

Ark., Fort Smith.—Knit Goods.—Dr. Stanford is, it is rumored, interested in organization of \$300,000 stock company to guarantee establishment of five knitting mills.

Ga., Columbus.—Hosiery.—Perkins Hosiery Mills has expended about \$25,000 for new intermediate fly frames, openers in cotton-blowing system, electrical motors, etc. (Recent item not exact.)

Ga., Columbus.—Cotton Goods.—Eagle & Phenix Mills will expend \$15,000 for improvements, not \$25,000, as lately reported; will erect 100,000-gallon water tank, install sprinkler system in warehouse purchased recently, install new water-wheel, etc.; all contracts awarded.

Ga., Columbus.—Hosiery.—Massey Hosiery Mills has expended \$20,000 for new knitting machinery, dye-house improvements, etc. (Recent report not exact.)

Ga., Gainesville.—Cotton Goods.—Georgia Manufacturing Co., incorporated with \$50,000 capital stock by R. E. Green, D. P. White and others.

Miss., Natchez.—Sheetings, etc.—Natchez Cotton Mill is reported as to have contracted for additional looms.

N. C., Greenville.—Silk.—F. G. James is interested in plan to install silk mill in building already erected.

N. C., High Point.—Hosiery.—High Point Hosiery Mills will add 125 machines, etc.; has erected additional building; new machinery reported as costing \$25,000.

S. C., Easley.—Cotton Cloth.—Alice Cotton Mills chartered with \$500,000 capital stock; E. H. Shanklin, president; Roy R. Smith, secretary; previously reported as to build 10,000-spindle and 200-loom plant; J. E. Sirrine is architect-engineer in charge.

Va., Norfolk.—Underwear.—Northside Knitting Mills purchased Northside Knitting Co. plant and increased daily output to 500 dozen articles of underwear; Thomas H. Haynor, president. (Recently reported incorporated with \$50,000 capital stock.)

## WATER-WORKS

Ala., North Birmingham, Station Birmingham.—City Council decided to expend \$3000 at once to install some duplicate equipment in water-works and light plant and will supplant request for larger amount recently stated; investigation will be made of both plants with view to undertaking more extensive work; Maury Nicholson, City Engineer.

Ala., Talladega.—City contemplates installation of precipitation and filtration plants; Dr. C. S. Northern may be addressed. (See "Machinery Wanted.")

Fla., Daytona.—City contemplates installing water-softening system; estimated cost \$3000. Address The Mayor.

Fla., Jacksonville.—City awarded contract to Logan Concrete & Engineering Co., Jacksonville, at \$57,500 to construct reinforced concrete reservoir to have capacity of 3,000,000 gallons. (Recently mentioned.)

Fla., Lakeland.—Board of Public Works, C. W. Deen, chairman, will receive bids until November 10 for improvements to water-works and electric-light plant recently noted; Wm. W. Lyon, consulting engineer, 305 Duval Bldg., Jacksonville, Fla. (See "Machinery Wanted.")

Fla., St. George's Island (not a postoffice).—Company organized with George W. Saxon, president, Tallahassee, Fla.; will construct water-works. (See "Land Developments.")

Ga., Dublin.—City will vote December 6 on

issuance of \$30,000 of bonds for improvement of water-works and electric-light plant. Address The Mayor. (Recently mentioned.)

Ga., Rome.—City postponed date of bond election from November 8 to December 6 for voting on issuance of \$75,000 of bonds for improvement and extension of water-works. Address The Mayor. (Recently mentioned.)

Mo., Baltimore.—Board of Estimates will allow Water Board \$200,000 for additional pump at Mount Royal Pumping Station; Alfred M. Quick, water engineer, City Hall.

Md., Brunswick.—City will construct concrete reservoir to have capacity of about 100,000 gallons; when completed auxiliary pump will be installed to pump water from reservoir into elevated tank on Wenner's Hill; John D. Mills has contract for excavation and has begun work; \$5000 bond issue voted for improvements to water-works; A. B. Hedges, Clerk and Treasurer. (Recently mentioned.)

Miss., Osyka.—City will construct water-works and electric-light plant recently noted; 18x40 feet; brick; to include reservoir, 40,000 gallons capacity; steel tank, 50,000 gallons capacity; install electrical machinery; bids opened November 8; Xavier A. Kramer, Magnolia, Miss., engineer in charge of construction; cost about \$20,000; plans and specifications at offices of Mayor and engineer, who will furnish synopses. (See "Machinery Wanted.")

Mo., Columbia.—City has engaged M. E. Fawkes as engineer in charge of improvements to water-works and electric-light plant; contemplated water-works improvements are extension of water mains and installation of hydrants, two deep wells and cisterns, deep-well pumps (Weber system), motor-driven air compressor and two motor-driven centrifugal pumps; \$125,000 bond issue voted. (Recently mentioned.)

Mo., Dexter.—City defeated \$23,000 bond issue for water-works. Address The Mayor. (Previously mentioned.)

N. C., Asheville.—City Reservoir Commission has accepted proposition of George H. Davidson of Davidson & Colvin, Asheville, to replace water-tight bottom of concrete reinforced reservoir with steel; area of 18,000 square feet to be replaced; estimated cost \$10,000; work in accordance with specifications of B. M. Lee, City Engineer.

N. C., Smithfield.—City will construct water-works; bids will be received until November 1; James A. Wellons, Mayor. (See "Machinery Wanted.")

Okl., Oklahoma City.—City will vote November 8 on issuance of \$250,000 of bonds for improvements to water-works, including extension of distributing system to various suburbs, extension of independent high-pressure fire system, installation of two equalizing towers, construction of sedimentation basin and other minor betterments as outlined by Superintendent Vincent G. Shinkle; estimated cost of distributing system in Packtown is \$25,000, and in Capitol Hill \$11,000; estimated cost of extension of independent high-pressure fire system is \$25,000, and two equalization towers \$25,000 to \$30,000; proposed sedimentation basin will have capacity of about 4,000,000 gallons.

Tex., Cotulla.—City is considering construction of water-works; C. F. Binkley, Mayor.

Tex., Denison.—City will expend and improve water-works; 1,000,000-gallon increase; cost \$50,000; engineer not selected; date of opening bids not set; W. W. Berry may be addressed. (Recently noted to have voted \$50,000 bond issue.)

Tex., Galveston.—City Commissioners awarded contract to A. M. Blodgett Construction Co., Kansas City, Mo., at \$8000 to lay city main across channel in Galveston causeway; A. T. Dickey, City Engineer. (Recently mentioned.)

Tex., Georgetown.—City has voted on \$45,000 bond issue for purchase of water-works and electric-light plant from W. N. Cole & Co. of New York.

Tex., Lufkin.—City voted issuance of bonds for improvements to water-works. Address The Mayor.

Va., Portsmouth.—City will vote in about 60 days on issuance of \$600,000 of water-works bonds; J. Davis Reed, Mayor.

Va., Dante.—Cinchfield Coal Corporation, 24 Broad St., New York, will increase water supply for its plant at Dante by laying eight miles of eight-inch cast-iron pipe from Clinch River to mining plant.

W. Va., Fairmont.—City Council approved recommendations of Shrewsbury B. Miller, City Engineer, for improvements to water-works and appointed committee (Arthur D. Simon and Clarence D. Robinson) to advertise for and purchase materials required and award contracts for construction work; recommendations adopted are for 6000 linear

feet of 20-inch pipe, weighing 533 tons; 4400 linear feet of 12-inch pipe, weighing 160 tons, and 3200 feet 10-inch pipe, weighing 100 tons, and erection of new pumping station. (Recently mentioned.)

## WOODWORKING PLANTS

Ala., Decatur.—Staves.—Holland-Blow Stave Co. will rebuild factory reported burned at loss of \$5000.

Ala., Tuscaloosa.—Cooperage.—Tuscaloosa Cooperage Co. will double output of plant; present capacity 6000 sets.

Ga., Milledgeville.—Doors, etc.—Fowler-Flemister Coal Co., Lewis Flemister, manager, will install machinery for manufacturing doors, window frames, etc.

Ga., Macon.—Wagons.—Brown Wagon Co., Lawson Brown, president, has contracted with Central of Georgia Power Co. to furnish electricity for operation of wagon works.

Miss., Fenwick.—Boxes.—T. J. Spragins & Co. will erect box factory recently noted; construction by company; will install box machinery, etc.; cost \$3000. (See "Machinery Wanted.")

N. C., Newbern.—Buggies.—G. S. Water & Sons' building (recently noted) will be 100x100 feet; brick or iron construction; cost \$15,000; company will erect; install electric and other woodworking machinery; date of opening machinery proposals not set; daily capacity two buggies.

Okl., Durant.—Furniture.—York Furniture Co., incorporated with \$10,000 capital stock by Y. E. York, Bettie York, Green Thompson, C. J. Tye and others.

Okl., Osage.—School Desks, etc.—Osage Welch School Desk & Furniture Co., incorporated with \$75,000 capital stock by D. S. Welch, I. E. Ross, Otis W. Gilson and Frank V. La Bountie, all of Oklahoma City, Okla., and M. Chaplin of Anamosa, Iowa; will establish plant to have capacity of 50,000 school desks annually, in addition to other products; J. A. Johnson, Oklahoma City, Okla., has contract to erect four main buildings. Mr. Welch is president. (Previously mentioned.)

S. C., Cheraw.—Doors, etc.—Cheraw Sash, Door & Lumber Co., incorporated with \$15,000 capital stock by C. K. Waddill, J. L. Craig and C. C. Douglass.

S. C., Pageland.—Wagons.—Pageland Buggy & Wagon Co., recently reported incorporated with \$5000 capital stock, has elected S. E. Adkins president, H. W. Crosswell vice-president, and H. N. Askins secretary-treasurer.

Va., Berkeley.—Boxes.—Berkeley Box & Lumber Co. will erect 150x250-foot building; cost \$30,000; install box and planing machinery; date of opening bids for construction of building and installing of machinery not set; L. H. Swan is president.

W. Va., Martinsburg.—Potomac-Shenandoah Company, Charles B. Hart, president, will operate cooperage plant. (See "Land Developments.")

## BURNED

Ala., Decatur.—Holland-Blow Stave Co.'s factory; estimated loss \$5000.

Ala., Russellville.—Sloss-Sheffield Steel & Iron Co.'s No. 3 warehouse damaged; loss \$17,000; main office, Birmingham, Ala.

Ark., Helena.—Silver Moon Co.'s Hotel destroyed and other buildings damaged; total loss \$40,000.

Ark., Sugar Grove.—J. W. Wilkins' cotton gin and grist mill.

Ga., Cartersville.—Greenwood Theater, owned by J. R. Smith of Atlanta, Ga.; loss \$40,000.

Ky., Greenville.—Greenville Milling Co.'s flour mill and grain elevator; loss \$60,000.

La., Many.—Hickey Jones Hardwood Lumber Co.'s sawmill.

Md., Bowie.—Henry Edlavitch's store, loss \$5000; Imperial Hotel, owned by Henry B. Gunther, loss \$15,000; John Lee Mulliken's saloon, loss \$4000; Richard Stansbury's two residences, loss \$5500; Hotel Bowie, owned by Robert Smith, loss \$5000.

Md., Nottingham.—Kirk & Co.'s warehouse, creamery and number of small buildings; loss \$15,000.

Md., Nottingham.—Lewis Kirk's warehouse. Miss., Montrose.—Home Lumber Co.'s planing mill; loss \$25,000 to \$30,000.

Mo., Springfield.—D. J. Landere Lumber Co.'s plant; estimated loss \$25,000.

N. C., Durham.—University High School buildings.

Okl., Henryetta.—Birge-Forbes Company's cotton gin; loss \$2000.

S. C., Bishopville.—Palmetto Oil Co.'s meal and hull house; loss \$15,000.



Tenn., Lebanon.—E. D. Stiles' store; loss \$17,000.  
 Tex., Burnett.—H. L. Dales' cotton gin; loss \$8000.  
 Tex., McKinney.—McKinney Cotton Oil Co.'s cotton gin; loss \$9000.  
 Tex., Sulphur Springs.—Farmers & Glinners' Cotton Oil Co.'s hullhouse; loss \$2000.

Va., Staunton.—Laurel Hill Milling Co.'s plant; loss \$8000.  
 Tex., Truscott.—Truscott Mercantile Co.'s store; loss on building \$5000.  
 Va., Portsmouth.—Portsmouth Cotton Oil Refining Corporation's oil department; loss \$50,000.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### APARTMENT-HOUSES

Ala., Gadsden.—W. T. Christopher will expend \$7500 to erect 50x50-foot two-story apartment-house recently noted; brick and stone; hot-water heat; plans and construction by owner.

Fla., Jacksonville.—H. F. Finn will erect apartment and store building; two stories; brick; 52x83 feet; fire stores on ground floor; four apartments above; cost \$15,000.

Fla., Jacksonville.—J. C. Halsema will erect store and apartment building; two stories; brick; six stores on ground floor; apartments above; cost \$10,000.

Fla., Jacksonville.—Kappner & Von Dohlen will erect store and apartment building; three stories; brick; 25.6x89 feet; cost \$10,000; lower floor stores; upper floors apartments.

Ga., Savannah.—Madrid Cox, 546 East Duffy St., will erect apartment-house recently noted; 53x74 feet; frame; cost \$8000; plans and construction by owner.

Md., Baltimore.—Homewood Apartment Co. has plans by Glidden & Friz, Glenn Bldg., Baltimore, for apartment-house at Homewood, Charles-Street Blvd. and 31st St.; six stories; brick construction; terra-cotta trimmings; 176x122 feet; cost \$250,000; construction in charge of owners. (Recently noted.)

Md., Roland Park.—Roland Park Co., 408 Roland Ave., contemplates erection of apartment-house.

Mo., St. Louis.—Karl Arnold will erect apartment-house.

Tenn., Chattanooga.—Frank Barker will erect \$5000 apartment-house.

Va., Portsmouth.—O. L. Williams will erect apartment-house; brick; three stories; flat gravel roof; cost \$2500; building will be 26x52 feet; to have three apartments; stoves and grates; gas lighting; plans and construction by owner.

#### ASSOCIATION AND FRATERNAL

La., New Orleans.—Knights of Columbus, 836 Carondelet St., will expend \$15,000 for improvements to hall, including shower and needle baths, gymnasium equipment, redecorations, etc.

N. C., Greensboro.—Masonic and Eastern Star Home, L. M. Clymen, Grand Patron, O. E. S., has not selected architect to prepare plans for home recently noted; 30 rooms; probably fireproof construction; heating and lighting not decided; cost \$15,000. Address F. M. Winchester, member of committee, Charlotte, N. C.

Tex., Arlington.—Grand Royal Arch Chapter of Texas has plans by Waller & Field, Fort Worth, Tex., for Home for Aged Masons.

Tex., Cleburne.—Olive Lodge, No. 31, Knights of Pythias, will erect Pythian castle; C. H. Warren, chairman of committee.

#### BANK AND OFFICE BUILDINGS

Ark., Texarkana.—Southern Life Insurance Co., I. Schwarz, president, will erect bank building. (See "Machinery Wanted.")

Fla., Fort Pierce.—St. Lucie County Bank, H. B. Race, president, Jacksonville, Fla., will erect bank building.

Ga., Cuthbert.—Bank of Carnegie, J. H. Manry, Jr., cashier, will erect bank building.

Ky., Anchorage.—Citizens' National Life Insurance Co. will erect office building; fireproof; two stories; concrete; cost \$70,000.

Ky., Louisville.—Caldwell estate decided. It is reported, to erect 15-story steel-frame bank and office building at 5th and Jeffersons Sts. for First National Bank.

N. C., Wilmington.—D. R. Foster purchased 16x100-foot site, on which, it is reported, to erect office building.

Okla., Oklahoma City.—O. G. Lee will expend \$20,000 to erect office and store building recently noted; plans by owner; materials purchased.

Tex., Mt. Vernon.—Merchants and Planters'

National Bank will rebuild bank building recently reported burned; 25x80 feet; semi-fireproof construction; stoves; electric lighting; cost \$10,000; bids opened October 20. Address proposals to G. A. Reaves.

Tex., Silver Valley.—Bids received until October 24 for erection of two-story brick bank building; foundation in brick to be furnished by owner; contractor to furnish all other material and labor; certified check for \$150 to accompany each bid; plans and specifications on file at office of W. Tharp, Sr., architect, South Houston, Tex.; plans and specifications will be furnished on receipt of \$10.

Tex., Texas City.—Texas City Transportation Co. authorized erection of office building at docks; H. B. Moore is general manager. (See "Warehouses.")

Tex., Vernon.—Farmers' State Bank is having plans prepared by Quannah (Tex.) architects for bank building; one story; 30x119 feet; brick; stone trimmings; cost \$10,000. (Recently mentioned.)

#### CHURCHES

Ark., Des Arc.—Presbyterian Church has plans by Weathers-Foley Company, Memphis, Tenn., for proposed edifice; 45x89 feet; ordinary construction; cost \$10,000.

Ark., Nashville.—Central Baptist congregation has plans for edifice. Address The Pastor, Central Baptist Church.

Ark., Nashville.—Presbyterian congregation has plans for edifice. Address The Pastor, Presbyterian Church.

Ark., Nashville.—Christian congregation has plans for edifice. Address The Pastor, Christian Church.

Ark., Nashville.—Mine Creek Baptist congregation has plans for edifice. Address The Pastor, Mine Creek Baptist Church.

Fla., St. Augustine.—African Methodist Episcopal Church, Rev. D. J. Carter, pastor, will rebuild edifice recently reported burned; 35x50 feet; cottage shaped; cost \$1200.

Ga., Beach.—Methodist congregation is preparing to erect church to replace present edifice. Address The Pastor of the Methodist Church.

Ga., Dublin.—Church of Immaculate Conception will expend \$5000 to erect edifice recently mentioned; seating capacity about 200; steam heat. Address Rev. Richard Hamilton, rector Sacred Heart Church, Milledgeville, Ga.

Md., Govans.—Govans Methodist Episcopal Church, York Rd. and Homeland Ave., is receiving bids on erection of proposed Sunday-school building; one story and basement; brick and stone; 40x70 feet; reinforced-concrete foundation; slate or terra-cotta roof; hardwood flooring; tiling and mantel work; estimated cost \$15,000; John N. Cowan, 106 West Madison St., and John Waters, 23 East Center St., both of Baltimore, are included among bidders; George N. MacKenzie, associated with Wyatt & Nolting, architects, Keyser Bldg., Baltimore, prepared plans.

Miss., Jackson.—West End Methodist congregation has begun erection of proposed edifice to cost \$40,000. Address The Pastor, West End Methodist Church.

Miss., Laurel.—First Methodist congregation is receiving bids on erection of proposed edifice to cost \$25,000. Address The Pastor, First Methodist Church.

N. C., Charlotte.—East Ave. A. R. P. Church, J. G. Kennedy, 10 North McDowell St., pastor, has not selected architect to prepare plans for brick edifice to cost \$25,000. (Recently noted.)

N. C., Mount Olive.—Methodist Church will have plans and specifications prepared by H. E. Bonitz, Wilmington, N. C., for \$15,000 edifice; J. P. McPhail, chairman building committee.

S. C., Rock Hill.—First Presbyterian Church, Rev. Alexander Martin, pastor, will erect edifice to cost about \$20,000.

S. C., Rock Hill.—Presbyterian church, Rev. Alexander Martin, pastor, contemplates erecting \$20,000 edifice.

Tex., El Paso.—B'nai Zion congregation, N. Schechter, rabbi, will erect synagogue to cost \$6000.

Tex., San Antonio.—Prospect Hill Baptist Church, W. W. Sloan, chairman building committee, will open bids October 26 (deferred date) for erection of edifice recently noted; 40x80 feet; semi-fireproof construction; heating plant to cost \$3500; lighting plant to cost \$300; cost of building, \$30,000; plans and specifications on file at office of South Texas Baptist, 208 Mackay Bldg.

Tex., Sherman.—Key Memorial Methodist Church, J. R. Atchley, pastor, will erect 50x80-foot edifice recently noted; steam heat; electric lighting; cost \$10,000.

Va., Norfolk.—Ferguson, Calrow & Taylor of Norfolk have completed plans for proposed edifice for Ghent Presbyterian Church; structure will be of brick and stone; Gothic style; tower in front; total seating capacity, 1000; bids received until October 28. (Previously mentioned.)

W. Va., Warwood.—Protestant Episcopal congregation contemplates erecting edifice. Address The Pastor, Protestant Episcopal Church.

#### CITY AND COUNTY

Ark., Little Rock.—Engine-house.—City will expend \$4000 to erect fire-engine house over town branch on south side of 4th St.; Geo. A. Stratman, Mayor.

Fla., Ocala.—Jail.—Marion County Commissioners, S. T. Sistrunk, clerk, will receive bids until November 9 for erection of jail; separate bids for building and steel jail work; each bid to be accompanied by certified check for \$250, payable to order of Board of Commissioners; plans and specifications at office of clerk at Ocala or of Francis J. Kennard, architect, American National Bank Bldg., Tampa, Fla., or may be had from latter on deposit of \$25; Geo. Mackay, chairman of Board. (Lately noted.)

Ga., Savannah.—City Market.—Bids will be received at office of J. de Bruyn Kops, architect, Savannah, for improvements to city market, including plumbing, electrical conduits, cement tile, plaster work, reinforced concrete, refrigerators, showcases, chicken coops, vegetable stalls, etc.; certified check for \$1000; bids to be submitted on uniform contract blanks; plans and specifications at office of architect or may be had on deposit of \$25; C. V. Hernandez, acting clerk of Council. (Previously noted.)

La., New Orleans.—Art Museum.—Board of Administration of Isaac Delgado Museum of Arts, 518 Iberville St., will open bids about November 1 for erection of art building recently noted; 91x119 feet; fireproof construction; direct steam heat; electric lighting; cost \$125,000; plans by Leidenbaum & Marx, Chicago, Ill.

Md., Baltimore.—Public Baths.—Board of Awards will receive bids at office of J. Sewell Thomas, City Register, City Hall, until October 26 for furnishing and erecting public bath at Greenmount and Harford Aves. and Monument St.; two stories and basement; brick and stone; concrete foundation; terra-cotta roofing; plans by Archer & Allen, Central Savings Bank Bldg., Baltimore; certified check for \$500, payable to Mayor and City Council; drawings and specifications at office of Edward D. Preston, Inspector of Buildings, City Hall; J. Barry Mahood, president of board. (Previously noted.)

Tenn., Memphis.—Police Station.—Police Station Commission will let contract November 2 (postponed from October 17) for erection of central police station; certified check for \$5000, payable to commission; plans and specifications at office of Shaw & Pfeil, architects, 1503 Tennessee Trust Bldg., Memphis; F. B. Hull Construction Co., Jackson, Miss., is one of bidders and invites subcontractors and material men to submit estimates. (See "Machinery Wanted.") Recently noted.)

W. Va., Parkersburg.—Greenhouse.—A. K. Ross, chairman committee on parks, will receive bids until October 26 for erection of greenhouse at City Park; certified check for \$100, payable to Frank Good, City Auditor, at whose office bids are on file.

#### DWELLINGS

Ala., Birmingham.—St. Mary's Church, Rev. W. N. Claybrook, pastor, has plans by Miller & Martin, Birmingham, for residence; stone construction.

Ala., Corey, P. O. Birmingham.—Wm. Elbott has plans by Warren & Welton, Empire Bldg., Birmingham, for eight-room dwelling; frame; brick veneer; cost \$4500.

Ala., Jasper.—J. H. Crawford will not erect dwelling as was recently stated.

Ark., Little Rock.—J. F. Pryor awarded contract to Charles T. Thirlon to erect two-

story frame dwelling; slate roof; cost \$8000.

D. C., Washington.—Lawrence R. Lee is having plans prepared by T. Kent Roberts, 819 17th St. N. W., Washington, for remodeling residence at 1752 Massachusetts Ave. N. W.; cost \$10,000.

Fla., Fort Lauderdale.—Don Farnsworth, 125 Moore St., Chicago, Ill., will expend \$2500 to erect dwelling recently noted.

Fla., Jacksonville.—J. W. Chever will erect two-story frame dwelling; cost \$3300.

Fla., Jacksonville.—Henry P. Adair will erect two-story stucco dwelling; 38x40 feet; cost \$5000.

Fla., Jacksonville.—C. A. Brown, Jr., will erect two dwellings; two stories; frame; cost \$6000.

Fla., Jacksonville.—F. O. Williams will erect two-story frame dwelling; cost \$4500.

Fla., Jacksonville.—J. H. Hopkins will erect \$2500 two-story brick-veneer residence.

Fla., Jacksonville.—C. W. Scott will erect 34 dwellings; one story; frame; cost \$3000.

Ga., Savannah.—H. H. Lattimore will erect semi-colonial style residence.

Ky., Lexington.—D. W. Case and Thomas Whitliff will erect residence; two stories; brick; stone foundation; seven rooms; cost \$5000; natural gas heat; gas and electric lighting; plans and construction by Mr. Whitliff.

La., New Orleans.—G. Pacarana will erect four double cottages; cost \$3000.

La., New Orleans.—E. H. McCaleb will erect three-story stucco dwelling; cost \$2000.

La., New Orleans.—H. Uman will erect single two-story residence; cost \$3400.

La., New Orleans.—J. W. Markel will erect two double cottages; cost \$3000.

Md., Baltimore.—John T. Donohue, 1808 Thames St., will erect number of two-story dwellings at Eastern Ave. and Canton St.; site 147x300 feet.

Md., Baltimore.—Bernard Oberdorfer, 1821 North Payson St., has plans by Stanislaus Russell, Clifton Ave. and 7th St., Baltimore, for residence on Duval Ave., Mont Alto; bungalow type; frame; steam or hot-water heat; electric lights; cost \$4000.

Md., Baltimore.—Walter Westphal, Highland Ave. and Baltimore St., is reported to have purchased site on Wilkens Ave., between Brunsywick St. and Millington La., 75x50 feet, and to erect block of two-story dwellings.

Md., Baltimore.—E. W. Gorman, 203 Augusta Ave., has plans by F. E. Ball, 213 St. Paul St., Baltimore, for two residences on Euclid Ave. between Woodland and Augusta Aves.; two stories; brick; tin roofs; electric wiring; steam heat; cost \$2000 each.

Md., Baltimore.—Edward J. Gallagher Realty Co., 237 East Monument St., will erect 12 dwellings on Lakewood Ave. and 26 or Glover St.; two stories; brick; cost \$47,000.

Md., Baltimore.—A. Warren Edwards, 1609 North Fulton Ave., has plans by Jacob F. Gerwig, 216 East Lexington St., Baltimore, for 12 dwellings on Chelsea Ter.; two stories; brick; stone trimmings; 15x50 feet; tin roofs; hot-air heat; cost \$2000 each; construction by owner.

Md., Baltimore.—James W. Amos, 2711 West North Ave., has plans by Jacob F. Gerwig, 216 East Lexington St., Baltimore, for seven dwellings on Edmondson Ave. west of 7th St.; two stories; brick; stone trimmings; 14 feet 2 inches by 46 feet; tin roof; hot-air heat; cost \$1200 each; construction by owner.

Md., Baltimore.—Wm. H. Ponder, Monterey Apartments, Linden Ave. and Whitelock St., has plans by Glidden & Friz, Glenn Bldg., Baltimore, for residence at Ten Hills; half stucco and half maroon shingle construction; cost \$12,000.

Md., Baltimore.—John J. Carlin, 215 St. Paul St., has plans by Stanislaus Russell, Clifton Ave. and 7th St., Baltimore, for two double dwellings on Blain Ave. between Waldheim and Garrison Aves.; two stories and basement; brick and stucco; slag roof; hot-water heat; electric lights and gas; cost \$15,000.

Md., Baltimore.—Louis A. Schultz has plans by Geo. R. Morris, 46 Gunther Bldg., Baltimore, for residence at Edgerton and Cleveland Aves., Lenox; two and a half stories; frame; slate roof; cost \$4200.

Md., Baltimore.—E. J. Gallagher Realty Co., 2519 East Monument St., will erect 18 dwellings at 509 to 531 Streper St.; two stories; 22x28 feet; tin roofs; furnace heat; cost \$18,000.

Md., Baltimore.—W. Elbert Sexton, 899 Reservoir St., is having plans prepared by Mottu & White, 322 North Charles St., Baltimore, for residence on Belvedere Ave., Roland

Heights; two and a half stories; ornamental frame; brick and stone trimmings; hardwood floors; cost \$10,000; contractors estimating are John Cowan, 106 West Madison St.; Gladfelter & Chambers, 2072 Woodberry Ave.; Willard E. Harn Company, 2700 Huntington Ave.; Ignatius Smith, 30 North Poppleton St., and A. K. Boteler, 1323 Myrtle Ave., all of Baltimore.

Md., Baltimore.—Henry J. Tinley, 314 North Charles St., Baltimore, prepared plans for residence at Colonial Park estates; 44x36 feet; hot-water heat; electric lighting; cost \$7500; will receive bids until October 22; contractors estimating are E. G. Turner, 1020 Harlem Ave.; John A. Sheridan, Courtland and Lexington Sts.; Boyd & Huff, 314 North Charles St., all of Baltimore; Zimmerman & Standiford of Woodlawn, Md.

Md., Bowe.—Richard Stansbury will rebuild dwellings reported burned; loss \$5500.

Md., Roslyn.—Mount Olive Church awarded contract to Wm. L. Brooks for erection of frame parsonage; stone foundation; slate roof; hot-water heat; cost \$4000.

Md., Ruxton.—Carl R. McKenrick, Calvert and German Sts., Baltimore, Md., will erect residence.

Md., Severna Park (not a postoffice).—Ray C. Faught, 2019 North Longwood St., Baltimore, Md., will, it is reported, erect residence; two and a half stories; frame.

Miss., Cleveland.—J. S. Leach of Sullivan, Ind., will erect residence.

Miss., Vicksburg.—E. F. Howard is having plans prepared by William Stanton, Vicksburg, for residence; two stories; brick.

Mo., St. Louis.—Alphons Naert will erect two dwellings.

Mo., St. Louis.—George S. Robinson will erect \$20,000 residence.

N. C., Statesville.—D. J. Craig will erect residence; 19 rooms; brick; ordinary construction; probably hot-water heat; electric lighting; plans by Wheeler & Stearn, Charlotte, N. C.; date of opening bids not determined.

Okla., Oklahoma City.—Leon Levy will erect two-story brick dwelling; cost \$19,350.

Tenn., Chattanooga.—J. B. F. Lowry, 325 Vine St., will erect dwelling in Glenwood addition.

Tex., El Paso.—Mrs. A. M. Howland has plans by Trost & Trost, El Paso, for two-story residence; stone and maroon pressed brick; cost \$6000 to \$7000.

Va., Lynchburg.—C. L. De Mott will erect seven-room bungalow.

Va., Richmond.—Wm. M. Miller will erect two-story frame dwelling; cost \$2500.

Va., Richmond.—Mrs. Annie M. Supplee will erect tenement-house; two stories; frame (two dwellings); cost \$2550.

Va., Richmond.—Geo. W. Chiles will erect two-story brick store and dwelling; cost \$3200.

Va., Richmond.—C. G. Schwalm will erect two-story brick dwelling; cost \$8000.

## GOVERNMENT AND STATE

Ala., Fort Morgan.—Coal Shed, etc.—Office of Constructing Quartermaster. Sealed proposals will be received in triplicate until October 23 for constructing coal shed, railroad track and trestle; plans, specifications, blank proposals, etc., on application; deposit of \$5 required for drawings and specifications, or may be seen at above office. Address Second Lieut. Edward F. Barlow, Coast Artillery Corps, Constructing Quartermaster.

Tex., Temple.—Postoffice.—Cecil L. Saunders, Clifton Forge, Va., is lowest bidder at \$68,000 to erect U. S. postoffice; James Knox Taylor, supervising architect, Treasury Department, Washington, D. C. (Recently mentioned.)

Va., Fort Monroe.—Barracks.—James H. Brinson, Hampton, Va., is lowest bidder at \$4700 for repairs to Barracks No. 93; Wm. G. Morris, Phoebus, Va., for plumbing and heating, and S. J. Watson for electrical wiring; Capt. Ernest R. Tilton, constructing quartermaster.

## HOTELS

Ark., Helena.—Silver Moon Co. will rebuild hotel reported burned.

Fla., Fort Lauderdale.—Don Farnsworth, 125 Monroe St., Chicago, Ill., has plans by Graff & Sons, Knoxville, Tenn., for hotel recently noted; 50 rooms; mill construction; electric lighting; cost \$20,000.

Fla., Fort Lauderdale.—Fort Lauderdale Land & Development Co., Henry R. Brown, manager, Greenville, Tenn., has plans by R. F. Graf & Sons, Knoxville, Tenn., for hotel building; 60x95 feet; three stories; annex,

two stories; electric lighting; cost \$16,000; bids opened October 24; address proposals to C. F. McCreminon, Miami, Fla. (See "Machinery Wanted.")

Fla., St. George's Island (not a postoffice). Company organized with Geo. W. Saxon, president, Tallahassee, Fla.; will erect hotel, etc. (See "Land Developments.")

Ky., White City (not a postoffice).—Kington Coal Co., W. W. Kington, president, Mortons Gap, Ky., will erect 20-room hotel; construction begun.

Md., Bowie.—Robert Smith will rebuild Bowie Hotel reported burned; loss \$5000.

N. C., Southmont.—Plantation House Co. will erect brick hotel.

N. C., Shelby.—John A. Darwin of Athens, Ga., proposes erection of hotel at Cleveland Springs; cost \$100,000.

N. C., Wilmington.—Atlantic Hotel Co. incorporated with \$250,000 capital stock by Geo. G. Carter, J. A. Taylor and others to erect hotel at Wrightsville Beach, to be under management of C. E. Cooper of Charlotte.

S. C., Greenville.—Gates Hotel Co. will probably be organized with \$210,000 capital stock by A. A. Gates and others to erect hotel; 115 to 125 rooms; five or six stories; fireproof construction; steel and reinforced concrete; dining-room to seat 125 guests; refrigerating and cold-storage plants; vacuum cleaning system; freight and passenger elevators; estimated cost, \$150,000.

Tex., Houston.—Jesse H. Jones has, it is reported, engaged Mauran & Russell, Chemical Bldg., St. Louis, Mo., as supervising architects for hotel to cost \$1,000,000.

Tex., Houston.—Eastern capitalist, represented by James H. Trezewant of Houston, leased site at Courthouse Square and will, it is reported, erect eight-story hotel to cost \$250,000.

W. Va., Moundsville.—Harry Hough of Wheeling, W. Va., is promoting erection of hotel and theater building; estimated cost, \$70,000.

## MISCELLANEOUS STRUCTURES

Fla., Palatka.—Clubhouse.—Palatka Athletic Association has plans by R. F. Enslay for clubhouse and wharf.

Ga., Savannah.—Stand.—Savannah Automobile Association will erect grandstand; O. T. Bacon, chairman grandstand committee.

Ga., Sandersville.—Sanitarium.—Dr. William Rawlins will erect additional sanitarium building.

La., Alexandria.—Sanitarium.—Dr. J. V. Bonnett purchased T. P. A. Hotel and will expend \$25,000 in remodeling as sanitarium.

La., Monroe.—Jail.—Ouachita parish, D. A. Breands, president Police Jury, has not selected architect to prepare plans for jail recently noted; probably fireproof; heating and lighting not decided; cost \$30,000.

Md., Baltimore.—Hospital.—Hebrew Hospital, E. Rosenfeld, chairman building committee, 32-34 South Paca St., opens bids October 17 for erection of dining-room and sun parlor recently noted; 14x25 feet; ordinary construction; plans by Louis Levi, 610 American Bldg., Baltimore.

N. C., Elom College.—Gymnasium.—Young Men's Christian Association, E. T. Hines, chairman committee, contemplates erection of boys' gymnasium; 50x100 feet; mill construction; cost \$1500.

D. C., Washington.—Home.—Louise Home, Massachusetts Ave. and 15th St., has plans by Marsh & Peter, 520 13th St. N. W., Washington, for remodeling and three-story addition, 36x38 feet.

Tex., Denison.—Clubhouse.—Denison Rod and Gun Club is having plans prepared for clubhouse to cost \$4000.

Va., Richmond.—Laboratory.—J. Shelton Horsley will erect laboratory; two stories; brick and concrete.

W. Va., Clarksburg.—Hospital.—St. Mary's Hospital will erect addition to cost \$30,000; Sisters of St. Joseph are in charge.

## RAILWAY STATIONS

Ark., Weiner.—St. Louis Southwestern Railway, C. D. Purdon, chief engineer, Tyler, Tex., will erect two-story brick depot.

N. C., Winston-Salem.—Winston-Salem Southbound Railroad, H. E. Fries, president, is prepared to award contracts for six stations at Hinkle, Cotton Grove, Daniel, Newsum, Palestine and Cedar Hill.

Tex., Texas City.—Texas City Transportation Co. authorized construction of depot at docks; H. B. Moore is general manager. (See "Warehouses.")

## SCHOOLS

Ala., Birmingham.—Board of Education will have plans prepared for proposed 12-room school at Avondale; J. H. Phillips, superintendent of schools.

Fla., Tampa.—L. W. Buchholz, secretary Board of Public Instruction, will receive bids until October 22 (change of date) for labor and materials for constructing high-school building; proposals must be submitted on regular form furnished by Mr. Buchholz; building erected under two contracts—general building and heating and ventilating; certified check with bid for former for \$250; with latter for \$150; plans and specifications at office of Hillsborough County Courthouse, Tampa; John T. Gunn, chairman. (Lately noted.)

Ga., Rome.—City will vote December 6 instead of November 8 (as recently noted) on \$100,000 bond issue for school improvements. Address The Mayor.

Ky., Cadiz.—City will receive plans until January 1, 1911, for graded and public high-school building; cost \$25,000 to \$30,000; Ben T. White, secretary of board; F. G. Terry, Mayor; will also erect two smaller buildings to cost \$600 to \$750.

La., Angle.—Washington Parish School Board, J. W. Bateman, superintendent, Franklinton, La., is receiving bids for erection of \$3000 frame school; plans on file at superintendent's office.

La., Elton.—Calcasieu Parish Board of Education, Lake Charles, La., John McNeese, parish superintendent, will soon award contract for erection of two-story frame school; plans by W. Krielow, Jennings, La.

La., Franklinton.—Washington Parish School Board has plans by Stevenson & Nelson, New Orleans, La., for school to replace Franklinton Collegiate Institute; frame; 11 rooms and auditorium to seat 400 people; Superintendent J. W. Bateman will receive bids for construction until October 29; certified check for \$250.

La., Pioneer.—West Carroll Parish School Board, Oak Grove, La., plans erection of \$7000 brick school.

Miss., Sandersville.—City will vote November 1 on \$5000 bond issue to erect school; R. W. Hoosey, Mayor.

Miss., Wiggins.—City proposes \$10,000 bond issue for erection of Harrison County Agricultural High School, provided building is located in Wiggins; location not decided; J. E. Lord, Mayor.

S. C., Shandon.—P. O. Columbia.—Town issued \$10,000 of bonds to erect school; S. T. Carter, Town Treasurer.

Tex., Floresville.—City will probably issue \$18,000 of bonds for school improvements. Address The Mayor.

Tex., Stephenville.—John Tarlton College contemplates expending \$75,000 to \$100,000 for erection of additional buildings.

Va., Norfolk.—Norfolk School Board is having plans prepared for two 14-room schools for colored children.

Va., Salem.—Southwest Virginia and Virginia Lutheran synods chose site at Salem for location of proposed Marion Female College; Rev. W. R. Brown of Rural Retreat, Va., president, and R. F. Kimes of Salem, secretary of committee.

W. Va., Bethany.—Bethany College will erect dormitory; 55 rooms; three stories and basement; fireproof; buff brick; tile roof; construction begun.

## STORES

Ala., Ensley.—Smiley & Sons will erect business building; brick; 100x150 feet.

Ala., Mobile.—W. D. Bellingrath will receive bids until November 1 for labor and material for construction of two-story brick business building at Royal and St. Anthony Sts.; plans and specifications at office of Stone Bros., architects, 109 Lowenstein Bldg., Mobile.

Ala., Tuscaloosa.—Leland Hardware Co., H. H. Leland, president, will erect proposed store building; 105x132 feet; two stories; mill construction.

Fla., Jacksonville.—H. F. Finn will erect store and apartment building. (See "Apartment-Houses.")

Fla., Jacksonville.—J. C. Halsema will erect store and apartment building. (See "Apartment-Houses.")

Fla., Jacksonville.—Kappher & Von Dohlen will erect store and apartment building. (See "Apartment-Houses.")

Ga., Atlanta.—M. P. Roan will erect business building; three stories; cost \$15,000.

La., Jena.—Jena Drug Co. will erect fireproof brick business building.

Md., Bowie.—Gottschalk Company will rebuild structure for John E. Mulliken reported burned; loss \$4000.

Md., Bowie.—Henry Edlavitch will rebuild store reported burned; loss \$10,000.

Md., Chestertown.—Millbourn A. Toulson has plans by A. C. Leach (address, care of Mr. Millbourn) for proposed store building; three stories; brick; metal roof; heating not decided; electric lighting; cost \$8000.

Mo., Kansas City.—Kawmo Wholesale Grocery Co., 403-5 Walnut St., will erect store building; five stories; steel, concrete and brick; 60x142 feet; cost \$60,000; 50,000 square brick; 60x142 feet; cost \$60,000; 51,000 square feet floor space.

N. C., Elom College.—Joseph C. McAdams has plans and contract for erection of brick store building; 27x65 feet; fireproof construction; cost \$3000.

N. C., Wilmington.—J. W. Murchison & Co. will erect store building; four stories; brick.

Okla., Oklahoma City.—O. G. Lee will expend \$20,000 to erect store and office building recently noted; plans by owner; materials purchased.

S. C., Charleston.—N. Scottile will erect business building several stories high.

S. C., Charleston.—A. R. Tomlinson awarded contract to J. T. Snelson, Charleston, for erection of store to replace burned structure; 32x34 feet; three stories; ordinary construction; fire doors and windows; plans by J. D. Newcomer, Charleston; cost \$10,000. (Recently noted.)

Tenn., Nashville.—John D. Fletcher has plans by J. Benner Fletcher, Nashville, for two store buildings.

Tenn., Trenton.—J. W. Barrett & Son will erect block of brick stores; 73x90 feet; two stories; will install elevator; cost \$4000; plans and construction by owner. (See "Machinery Wanted.")

Tex., Dallas.—Breihan, Kaplan & Co. will erect two-story brick business building.

Tex., El Paso.—W. G. Walz will expend \$4000 to remodel store building, including solid plate-glass fronts, etc.

S. C., Charleston.—T. A. Wilbur & Son awarded contract to J. T. Snelson, Charleston, for erection of store to replace burned building; three stories; 35x210 feet; mill construction; electric lighting; cost \$15,000; plans by J. D. Newcomer, Charleston. (Recently noted.)

Tex., El Paso.—J. Calisher Dry Goods Co. has plans by Trost & Trost, El Paso, for store building; five stories, basement, sub-basement and roof garden; reinforced concrete. (Previously noted.)

Tex., Houston.—Mrs. L. S. Koehler will erect business building; two stories; brick; 25x45 feet; cost \$4000.

Va., Clifton Forge.—L. W. Farrier will erect store building.

Va., Lynchburg.—John Wall's estate will erect brick building; 58x90 feet; slag roof; cost \$6000.

Va., Portsmouth.—Joseph Grice will erect addition to store building, making entire length 100 feet.

Va., Richmond.—Geo. W. Chiles will erect store and dwelling. (See "Dwellings.")

## THEATERS

Md., Baltimore.—Empire Theater Co., 708 Fidelity Bldg., has plans by Otto G. Simonson, American Bldg., Baltimore, for theater on Fayette St. near Eutaw St.; 100x156 feet; three stories and basement; brick, terracotta and stone; steel and fireproof throughout. (Recently noted.)

W. Va., Moundsville.—Harry Hough of Wheeling, W. Va., is promoting erection of theater and hotel building; estimated cost, \$70,000.

## WAREHOUSES

Ky., Paducah.—Indian Refining Co., Cincinnati, O., will erect warehouse.

Md., Baltimore.—Jarboe Bros., 1200 Frederick Ave., have plans by F. E. Beall, 232 St. Paul St., Baltimore, for improvements to warehouse, including new front; cost \$8000.

N. C., Wilmington.—Atlantic Coast Line Railroad, E. B. Pleasants, chief engineer, has completed plans for proposed warehouse, 100x200 feet, to be erected on river front; piling for foundation is being driven by contractor, Diamond Steamboat & Wecking Co.; bids for construction work are being received.

Tex., Texas City.—Texas City Transportation Co. authorized construction of additional fireproof warehouse 100x750 feet, installation of another 500-kilowatt electrical



generator, erection of depot and office building at docks, construction of five miles additional yard track, purchase of 20 flat cars, two coaches and two switch locomotives; these facilities additional to previous construction completed and will cost \$250,000, beginning expenditure of additional \$1,000,000 for terminal facilities during next 12 months; H. B. Moore is general manager.

Tex., Galveston.—Galveston Brewing Co. is

having plans prepared by Stowe & Stowe of Galveston for cold-storage warehouse; building will be insulated with granulated cork; will invite bids for construction.

Tex., Laredo.—Southern Texas Truck Growers' Association, John H. Davis, president, decided upon tentative plans for warehouses at various locations; structures are at first to be 100 feet long and 40 feet wide, and later may be lengthened.

## BUILDING CONTRACTS AWARDED

### APARTMENT-HOUSES

Tenn., Chattanooga.—Miller Bros. Company, 7th and Market Sts., awarded contract to Joe Miles, 16 Snow St., Hill City, Tenn., for erection of apartment and store building; brick; 25x100 feet; three stories; cost \$4000. (Recently noted.)

### BANK AND OFFICE BUILDINGS

Fla., Daytona.—Merchants' Bank will expend \$30,000 to erect bank building; 37 feet 3 inches by 64 feet 4 inches and 22x67 feet; brick and stone; steam heat; electric lighting; plans by W. B. Taley, Jacksonville, Fla.; contract recently noted awarded to Hough & Bond, Daytona.

Ga., Homer.—Bank of Homer, L. N. Turk, president, awarded contract to A. T. Parks, Maysville, Ga., for erection of bank building recently noted; 20x50 feet.

Md., Baltimore.—Owners' Realty Co., Calvert Bldg., will erect office building at northwest corner Saratoga and Courtland Sts.; two stories; brick; 51x26 feet; steam heat; electric and gas fixtures; cost \$4000; contract awarded to John K. McIVER, 309 Wilson Bldg., Baltimore; plans by Charles W. Price, 1912 West Franklin St., Baltimore. (Recently mentioned.)

Md., Baltimore.—National Oil Co., William S. Olive, manager, 124 South Calvert St., awarded contract to Charles L. Stockhausen, National Marine Bank Bldg., Baltimore, to erect brick and stone office building 18x22 feet and brick stable 20x75 feet on 24th St., near Hampden; estimated cost, \$3000.

N. C., Booneville.—Commercial and Savings Bank, F. W. Day, president, awarded contract to J. F. Allen & Co., North Wilkesboro, N. C., for erection of bank building recently noted; 25x50 feet; ordinary construction; cost \$2500.

Okla., Okmulgee.—Frank Gillespie will expend \$15,000 to erect office and store building; 31x75 feet; contract recently noted awarded to W. R. Stuart, Okmulgee. (See "Stores.")

Tenn., Etowah.—People's Bank awarded contract to J. C. Lucas, Etowah, for erection of proposed bank building; 25x90 feet; two stories; ordinary construction; cost \$5000.

### CHURCHES

La., Monroe.—Baptist congregation, Rev. J. T. H. Wharton, D.D., pastor, will probably award contract to Frank M. Masling, Jackson and Apple Sts., Monroe, for erection of edifice recently noted; 68x105 feet; semi-fireproof construction; hot-air heat; electric lighting; cost \$25,000; plans by Smith & Bachel, Union Trust Bldg., Monroe.

### COURTHOUSES

Ark., Rison.—Cleveland County Commissioners awarded contract at \$41,900 to Monk & Richey of Pine Bluff, Ark., for erection of courthouse; two stories and basement; ordinary construction; steam heat; electric lights; plans by Theo. M. Sanders, Little Rock, Ark. (Recently mentioned.)

Tex., Port Lavaca.—Calhoun County Commissioners awarded contract at \$37,993 to Falls City Construction Co. of Louisville, Ky., for erection of main building of courthouse; plans by Chamberlin & Co., Birmingham, Ala. (Recently noted.)

### DWELLINGS

Ala., Corey, P. O. Birmingham.—William Everett awarded contract to H. F. Wood to erect two-story frame dwelling; cost \$3000.

D. C., Washington.—Mrs. S. P. Okie, 1225 Connecticut Ave. N. W., has plans by and awarded contract to A. M. Schneider, Bond Bldg., Washington, for repairing dwelling; ordinary construction; hot-water heat; cost \$5000.

D. C., Washington.—H. L. Thornton, 607 13th St. N. W., awarded contract to J. B. Giddings, Washington, for erection of two-story frame dwelling at 6840 5th St. N. W.; cost \$3000; plans by Cloughton West, 222 Oxford Bldg., Washington.

Fla., New Smyrna.—W. L. Lopez awarded

contract to Eddy & Lopez, New Smyrna, for erection of 10-room residence.

Fla., St. Petersburg.—F. W. Wilcox awarded contract to R. E. Sykes for erection of residence; colonial style; two stories and attic; concrete blocks; main building 40x40 feet; rear wing 28x30 feet; will incorporate present residence into wing with stone block walls; hot-water heat; electric lights; 9x40-foot veranda.

Ky., White City (not a postoffice).—Kington Coal Co., W. W. Kington, president, Mortons Gap, Ky., awarded contract for erection of proposed miners' houses; three and four rooms; ordinary and mill construction; cost \$32,500; contemplates erection of 100 dwellings this fall; is also erecting 20-room hotel. (See "Machinery Wanted.")

Md., Baltimore.—L. D. Davis awarded contract to Thos. R. Windsor, 1261 Columbia Ave., Baltimore, for erection of residence at Ten Hills; two and a half stories; slate roof; hot-water heat; gas and electric lights; cost \$8000; plans by Glidden & Friz, Glenn Bldg., Baltimore. (Recently noted.)

Md., Baltimore.—Wm. H. Baker, Jr., awarded contract to Engineering-Contracting Co., St. Paul and Franklin Sts., Baltimore, for erection of 20 dwellings at Windsor Hills; two stories; brick; porch fronts; tin roof; electric and gas fixtures; steam heat.

Md., Roland Park.—Mrs. C. Nicoll awarded contract to Roland Park Co., 408 Roland Ave., Roland Park, for erection of residence; two and a half stories; brick; steam heat; gas and electric lights; plans by Howard Hill, 11 East Pleasant St., Baltimore, Md. (Recently mentioned.)

Md., Roland Park.—S. S. Foote, 404 Guilford Ave., awarded contract to H. C. Barnes, 17 North Frederick St., Baltimore, Md., to erect residence; two and a half stories; frame; hot-water heat; gas and electric lights; cost \$10,000; plans by Edward H. Glidden and Clyde N. Friz, Glenn Bldg., Baltimore, Md. (Previously noted.)

N. C., Elom College.—I. E. Harris has plans by and awarded contract to Joseph C. McAdams, Elom College, for nine-room dwelling; cost \$3000; materials purchased.

N. C., Greensboro.—R. G. Vaughn awarded contract to J. C. Morris, Greensboro, for erection of addition to dwelling recently noted; brick veneer; probably hot-water heat; electric lighting; cost \$8000; plans by F. P. Weston, Greensboro. (See "Machinery Wanted.")

N. C., Winston-Salem.—Frank Raliff awarded contract to W. G. Melchor, Winston-Salem, for erection of residence; two stories; 12 rooms; frame; shingle roof; gas and electric lights; cost \$5000.

S. C., Florence.—R. Harry Farmer awarded contract to Silas Bounds for erection of residence.

Tenn., Chattanooga.—A. J. Saffern awarded contract to L. A. Flinn, 506 Lewis St., Ridgedale, Tenn., for erection of residence; two stories; brick; shingle roof; stone trimmings; oak and hard pine interior finish; gas and electric lights; hot-air heat; cost \$4000; construction begun.

Tenn., Knoxville.—Benjamin F. Briscoe awarded contract to Thomas & Turner, Knoxville, for erection of veneer residence; cost \$8000.

Tex., Dallas.—C. J. Jackson has plans by and awarded contract to A. B. Bailey, Dallas, for erection of \$5000 residence.

Tex., Palestine.—A. B. Hoiges awarded contract to J. B. Rountree, Palestine, for erection of residence; two stories; 16 rooms; brick veneer; 65x65 feet; gallery 16x80 feet; cost \$15,000.

Va., Leesburg.—Howard Cole awarded contract to Sampson & Dawson of Leesburg to erect residence.

Va., Norfolk.—A. L. Pope will erect 33x33-foot dwelling; frame; hot-water heat; cost \$4000; contract recently noted awarded to L. M. Cloud, Norfolk.

Va., Portsmouth.—Lawrence Bros. awarded contract to W. A. Vance for erection of two-story frame store and dwelling; cost \$2225.

Va., Portsmouth.—Mrs. Lula MacA. Scrimgeour awarded contract to C. M. Major for

erection of residence; two stories; frame; metal roof; cost \$3700.

W. Va., Wheeling.—Julian G. Hearne awarded contract for erection of residence as follows: General contract to R. L. Byrum of Martin's Ferry, O.; heating to R. W. Kyle of Wheeling, and plumbing to William Hare's Sons of Wheeling; English half-timber style with concrete and tapestry brick; cost \$30,000; plans by E. B. Frazenheim of Wheeling.

### GOVERNMENT AND STATE

Tex., Temple.—Postoffice.—Government has not awarded contract to Cecil L. Saunders, Chamber of Commerce Bldg., Cleveland, O., for erection of United States postoffice, as was recently stated.

### HOTELS

Miss., Vicksburg.—Mississippi Hotel Co. awarded contract to H. H. Davis, Vicksburg, for improvements to Hotel Carroll. (Previously noted.)

### MISCELLANEOUS STRUCTURES

Md., Baltimore.—Stable.—National Oil Co., 124 South Calvert St., awarded contract to Charles L. Stockhausen, National Marine Bank Bldg., to erect brick stable 20x75 feet. (See Bank and Office Buildings.)

Md., Baltimore.—Stable.—Monumental Brewing Co., Lombard and 5th Sts., Highlandtown, awarded contract to J. Henry Miller, 108 Dover St., Baltimore, to erect stable; two stories; 12x44 feet; brick and stone; fireproof; concrete floors on first floor; provision for stabling 50 horses and for storage.

Md., Baltimore.—Corridor.—Johns Hopkins Hospital awarded contract to B. F. Bennett Building Co., 123 South Howard St., Baltimore, for erection of corridor and other improvements; corridor to connect Harriet Lane Hospital with main corridor of principal hospital building; 24 feet high; 123 feet long; fire-brick construction; terra-cotta trimmings; tile floors; electric lights; cost \$19,000; plans by Wyatt & Nolting, Keyser Bldg., Baltimore. (Recently noted.)

Va., Lynchburg.—Parish-house.—St. Paul's Episcopal Church awarded contract to John P. Pettyjohn & Co. of Lynchburg to erect parish-house; 76x51 feet; stone; steam heat; cost \$20,000; plans by Lewis & Burnham of Lynchburg.

### SCHOOLS

Ga., Carlton.—City awarded contract for erection of school; two stories; brick; voted \$5000 bond issue; R. W. Huff, Mayor.

Okla., Shawnee.—Baptist State Convention awarded contract to Higgin & Furnace, Shawnee, for erection of administration building; main building, 164 feet long; extreme length, including approaches on either end, 216 feet; fireproof construction; \$5000 steam-heating plant; city electric light; Carthage stone purchased for portion of building; cost \$100,000; plans by Charles H. Sudhoelter, Muskogee, Okla. (Recently noted.)

Va., Norfolk.—School Trustees of Norfolk County awarded contract to Seay Bros., Norfolk, for erection of colored school at Titus Town, recently noted; 56x77 feet; brick; slate roof; cost \$5500; plans by W. T. Zepp, Norfolk.

### STORES

Md., Baltimore.—Hochschild, Kohn & Co., Howard & Lexington Sts., awarded contract

to Morrow Bros., 219 North Charles St., Baltimore, for erection of two six-story brick department stores at 208 North Howard St. and southeast and southwest corner Clay St. and Kimmel Al.; 27x118 feet, 52 feet 5 inches by 123 feet, and 60 feet by 78 feet 1 1/2 inches; slag roof; steam heat; cost of main building, \$36,840; of annex, \$46,640; plans by Joseph Evans Sperry, Calvert Bldg., Baltimore. (Recently mentioned.)

Okla., Okmulgee.—Frank Gillespie will expend \$15,000 to erect store and office building; 31x75 feet; three stories; ordinary construction; gas heating; electric lighting; plans by John V. Starr, Tulsa, Okla.; contract recently noted awarded to W. R. Stuart, Okmulgee.

S. C., Greer.—R. L. Marchant awarded contract to J. C. Cunningham, Greer, for erection of three-story business building; 28x90 feet; ordinary construction; cost \$8500; plans by Thomas Keating, Greer.

Tenn., Chattanooga.—Miller Bros. Company awarded contract for erection of store and apartment building. (See "Apartment-Houses.") Recently noted.)

Tex., Dallas.—General Electric Co., Schenectady, N. Y., awarded contract to J. W. Slaughter Construction Co. of Dallas for erection of building; three stories; 104x93 feet; mill construction; concrete foundation; brick walls and heavy timbers; metal windows; automatic fire doors; sprinkler system; fire extinguishers; hot-water heat; electric elevators; face-brick fronts; stone trimmings; cost \$50,000; plans by and construction under supervision of Harry W. Childs Dallas.

Va., Portsmouth.—Lawrence Bros. awarded contract for erection of store and dwelling. (See "Dwellings.")

W. Va., Keystone.—Reynolds Shor Company awarded contract to Wiggins Bros., North Fork, W. Va., for erection of store building recently noted; 20x90 feet; mill construction; hot-water heat; electric lighting; cost \$5000; plans by Mr. Proctor, North Fork, W. Va.

### WAREHOUSES

La., Alexandria.—Bonner Oil Co., Houston, Tex., awarded contract for rebuilding warehouse recently noted burned; 75x100 feet; galvanized-iron construction; cost \$2900.

Md., Baltimore.—Monumental Brewing Co., Lombard and 5th Sts., Highlandtown, awarded contract to J. Henry Miller, 108 Dover St., Baltimore, to erect warehouse; one story; brick; slag roof; electric light; concrete floors; plans by Otto C. Wolf, Philadelphia, Pa.

Mo., St. Louis.—The Texas Company, Dallas, Tex., awarded contract to Steel Roof Truss Co., 618 Bank of Commerce Bldg., St. Louis, for steel trusses, etc., for erection of proposed storage warehouse.

Mo., St. Louis.—Water-Pierce Oil Co. awarded contract to Steel Roof Truss Co., 618 New Bank of Commerce Bldg., St. Louis, for steel work for fireproof storage sheds recently noted to be erected; estimated cost, \$30,000.

Va., Altavista.—People's Warehouse Co. awarded contract to Overstreet & Preston, Bedford City, Va., for erection of warehouse recently noted; 85x110 feet; ordinary construction; galvanized siding; electric lighting; cost \$4500.

Va., Staunton.—R. L. Stratton & Co. awarded contract to C. W. Lambert of Staunton to erect warehouse; four stories; brick and reinforced concrete; estimated cost \$13,000.

## RAILROAD CONSTRUCTION

### RAILWAYS

Ala., Livingston.—M. N. Sikes of Livingston advises that he has been awarded a large contract by the Sumter & Choctaw Railroad Co. for an extension from Edna to Rob John, Ala., and would like to secure two or three small outfits.

Ala., Tuscaloosa.—Official: Construction of the Tuscaloosa Mineral Railroad is not yet authorized. Two surveys were made from Tuscaloosa to Brookwood, one requiring a viaduct 450 feet long and 135 feet high, the other needing a viaduct 300 feet long and 115 feet high, besides another bridge 150 feet long and 80 feet high, with viaduct approaches 500 feet long and 50 feet high. Woolsey Fennell is engineer.

Ala., Tuscaloosa.—W. R. Pearson of Burlington, Iowa, says a report is in the field near Tuscaloosa making a new survey for the proposed Tuscaloosa Mineral Railroad, in which F. G. Blair and Henry B. Foster of Tuscaloosa are interested.

Ark., Greenwood.—The Arkansas, Oklaho-

ma & Texas Railway Co. has been chartered to build a line 5 1/2 miles long from Arkana Witt.

Ark., Hope.—The stockholders' meeting of the Gulf & Magnolia Northern Railroad, it is reported, authorized the directors to proceed with construction, and a bond issue was approved. The route has been located from Hope, Ark., to Monroe, La., about 110 miles. S. Q. Sevier is president; J. H. Betts, vice-president; P. A. Thorp, secretary, and J. L. Davis, treasurer.

Ark., Hot Springs.—The Hot Springs, Ouachita & Mena Railway Co. has incorporated with capital stock of \$770,000, of which \$154,000 has been subscribed to build a line from Mena to Hot Springs, about 75 miles. The incorporators are James F. Read, J. R. McDonough, G. B. Wood, J. R. Davis, J. P. Davis, Wright Pickett, Scott Wood, George B. Dennis, Harry B. Ravenscraft and Gibson to the Mena & Hot Springs Railway Co. southwest in Sebastian county to connect with the Rock Island line. The incorporators are H. Denman, W. T. Quinley, Ran-

som Gulley, Jr., C. H. Finley, J. F. Read, John Trigg, Will Hall, S. T. Moore, R. A. McEachin and Amos Johnson.

Ark., Mena.—A charter has been granted to build a line about 75 miles long from Mena to Hot Springs, Ark.; authorized capital \$800,000, of which \$155,000 is subscribed. The incorporators are George Legate, Eugene Cox, W. P. Parks, W. M. Pipkin, John Thompson and A. H. Scoggin, all of Mena, Ark.

Ark., Searcy.—J. B. Grammer, vice-president, writes that the Searcy-Kensett Transportation Co. of Searcy will build a line from the center of town to the North Arkansas Railroad, one and one-half miles; will operate motor car and trailer also over the latter to Kensett, four miles, to meet trains on the Iron Mountain; expect to operate by November 1.

Fla., Haines City.—According to a press report, it is the Atlantic Coast Line which has let contract for a railroad from Haines City via Avon City to the Caloosahatchee River. E. B. Pleasants is chief engineer at Wilmington, N. C.

Fla., Tarpon Springs.—C. H. Lutz, general manager of the Tampa & Gulf Coast Railway, Odessa, Fla., says there is no ground for the recently circulated report that an extension would be built to St. Petersburg, Fla.

Ga., Atlanta.—The Fairburn & Atlanta Electric Railway Co., says an officer, will build 10½ miles from Fairburn to College Park, including one cement bridge over the Atlanta, Birmingham & Atlantic Railway. Date for opening bids not determined. W. T. Roberts of Fairburn, Ga., is president. L. W. Roberts is chief engineer.

Ga., Augusta.—It is announced that the Augusta Railway & Electric Co. and the Augusta & Aiken Railway have been sold by the Harriman estate to Redmond & Co. of New York and that the purchasers will make large improvements and extensions. James U. Jackson of Augusta is vice-president and manager.

Ga., Cairo.—The Pelham & Havana Railroad Co., says a dispatch, has begun grading on its extension from Calvary toward Havana, Fla.

Ga., Carnesville.—The Carnesville Railway Co. has been granted a charter to build its line, as heretofore described, connecting Carnesville and Toccoa, 20 miles, via Mize and Red Hill; capital \$200,000. Incorporators are W. S. Erwin and J. H. Hicks of Clarksville, J. C. Edwards and W. H. Davis of Toccoa, J. C. Edwards and W. H. Parker of Mize, W. R. Whitney and W. P. King of Red Hill, S. J. Oliver and L. F. Lenhardt, J. W. Landrum and J. R. Hill of Carnesville.

Ga., Du Pont.—The Marsh Cypress Co. is reported to have built a lumber railroad out of Du Pont to develop timber land.

Ky., Riverton.—The Eastern Kentucky Railroad, according to a press report, proposes to extend from Webbville via Blaine, Flat Gap, Barnett's Creek and Sayersville to coal fields in Magoffin county. S. G. Bates of Riverton, Ky., is vice president and general manager.

Ky., Glasgow.—The Louisville, Lincoln Farm & Mammoth Cave Traction Co., says a telegram, has completed survey and staked out the route from Glasgow to Hodgenville, Ky., about 50 miles. J. M. Richardson is president; J. O. McDaniels, vice-president; J. Lewis Williams, general counsel.

Ky., Elkhorn City.—The Chesapeake & Ohio Railway, it is reported, will build an extension into Buchanan county, Virginia, about 20 miles, to develop coal property. H. Pierce is engineer of construction at Richmond, Va.

Ky., Jackson.—The Lexington & Eastern Railway is reported to have let contracts for the extension from Jackson to Whitesburg, 80 miles, in five sections of 16 miles each to Lane Bros. of Baltimore, Md.; Mason, Hanger & Co. of Frankfort, Ky.; Jones Bros. of Columbus, O.; W. J. Oliver of Knoxville, Tenn., and the Luck Construction Co. of Roanoke, Va. The work includes nine tunnels, and it must be completed in a year.

Ky., Jackson.—Contract will be awarded immediately, it is reported, for the extension of the Lexington & Eastern Railroad from a point two miles east of Jackson to a point beyond Whitesburg, Ky., survey having been made. John Marston, Jr., is chief engineer at Lexington, Ky.

Ky., Wasloto.—The Wasloto & Black Mountain Railroad Co. is reported to have practically completed its grade to Harlan, Ky., and tracklaying has begun. Track is reported laid as far as Dry Branch, 20 miles from Harlan, and it is estimated will be completed by November 15.

Mo., Cape Girardeau.—Official information is to the effect that the preliminary surveys are being made by Major James F. Brook for

a railroad from Cape Girardeau about 50 miles to a point on the Mississippi River opposite Hickman, Ky. Louis Houck, president of the Cape Girardeau & Chester Railroad, and also of the Chester, Perryville & Ste. Genevieve Railway, is interested.

N. C., Robbinsville.—The Whiting Lumber Co., according to a press dispatch, will build a railroad from Robbinsville, about 25 miles, to connect with the Bushnell-Maryville branch of the Southern Railway at Fontana. Address Asheville, N. C., or Land Title Building, Philadelphia, Pa.

N. C., Scotland Neck.—A dispatch says that L. R. Mills of Wake Forest, N. C., is surveying for the railroad to be built by the Bowers-White Lumber Co., of which W. H. White is manager.

N. C., Spray.—Francis J. de Giers, 64 Wall St., New York, is reported as saying that the American Warehouse Co. in North Carolina is backing the plan to build a railroad from Spray, N. C., to Ridgeway, Va., 12 miles, that survey is being made and contracts will be awarded in a few days. The line will also reach Draper and Leaksville. J. H. Marsteller of Roanoke, Va., it was reported, recently went over the route.

Okla., Elk City.—The Wichita Falls & Northwestern Railway, according to a dispatch, will build an extension of 20 miles from Elk City to Hamman, Okla. R. A. Thompson is chief engineer at Wichita Falls, Tex.

Okla., Oklahoma City.—D. K. Cunningham, secretary of the Denver, Kingfisher & Gulf Railway Co., confirms the report that the railroad committee of the Oklahoma City Chamber of Commerce has recommended paying a \$100,000 bonus to that company, which contemplates building a line from Oklahoma City to Denver, Col. The other officers are J. M. McDonald, president; H. C. Muender, general manager; R. Pappé, treasurer.

Okla., Okmulgee.—The Missouri, Oklahoma & Gulf Railway, says a dispatch, proposes to build an extension from Coalton to Okmulgee, about 30 miles. J. J. Harrison is chief engineer at Durant, Okla.

S. C., Greenwood.—The American Railway Construction Co. of Montreal, Canada, is reported as saying that it contemplates building a line from Greenwood to Saluda, S. C., and other points. It appears that it may be interested in the financing of the line that is proposed between the two places.

S. C., McBee.—W. R. Bonsal of Hamlet, N. C., confirms the report that the South Carolina Western Railway is building a line from McBee via Hartsville and Darlington to Florence, S. C.

Tenn., Dyersburg.—The Chicago, Memphis & Gulf Railroad Co., according to a dispatch, is asking bids on four miles of grading on its line to Hickman, Ky.—S. G. Latta of Dyersburg, Tenn., is president.

Tenn., Harriman.—Official information is to the effect that contract will be let immediately for construction on the Harriman, Knoxville & Eastern Railroad. W. J. Clark is chief engineer and C. E. Hendrick is president at Harriman, Tenn.

Tenn., Memphis.—The Clarksburg, Clarksdale, Covington & Colliersville Interurban Railway Co. has amended its charter for that part of its line in Memphis to comply with a city ordinance. The incorporators are R. F. Tate, W. A. Percy, H. E. Craft, M. J. Roach, W. H. Withers, R. D. Saunders and R. T. Fant.

Tenn., Murfreesboro.—B. F. Martz of Columbus, O., it is reported, represents a company which contemplates building an interurban electric railway from Murfreesboro to Eagleville, 18 miles, and also from Murfreesboro to Woodbury, Tenn., about 15 miles.

Tenn., Nashville.—Concerning the proposed electric railway from Nashville to Gallatin, Tenn., projected by H. H. Mayberry of Franklin, Tenn., the Manufacturers Record is informed that \$75,000 have been subscribed along the route from Gallatin to Nashville, 30 miles, and the latter city is now asked for \$25,000 subscription.

Tenn., Harriman.—Official information concerning the Harriman, Knoxville & Eastern Railroad Co.'s plan is as follows: Charter calls for line from Harriman, Tenn., to the Atlantic coast at a point not yet determined. About 20 miles have been located and contracts will be let immediately. Route is through Roane, Anderson, Knox and Sevier counties via Knoxville, Tenn., and then through North Carolina. Cassell & Harris of Harriman, Tenn., are general counsel.

Tenn., Jackson.—Jackson has voted \$75,000 of bonds for the proposed Birmingham & Northwestern Railroad. Dyersburg, Tenn., has voted \$50,000 for the same purpose, this being also a bond subscription. R. M. Hall

is president, Dyersburg, Tenn., and John L. Williams, chief engineer. Line will connect Jackson and Dyersburg, 45 miles.

Tex., Galveston.—The Galveston-Houston Interurban Electric Railway Co., according to a report quoting L. C. Bradley, manager of the Galveston Electric Co., has laid 10½ miles of track between Texas City Junction and League City on its line to Houston, 55 miles.

Tex., Linden.—A. G. Elliott, representing the Texas Iron & Coal Co. of Dallas, Tex., is reported planning to build a railroad from Linden to iron-ore fields.

Tex., Texas City.—The Texas City Transportation Co. will, it is announced, build five miles additional of yard track.

Va., Moccasin Gap.—The Southern Railway, according to a dispatch, has operated its first passenger train over the Holston River Railroad from Moccasin Gap to Persia, Tenn., it will be opened for regular business October 17.

W. Va., Fairmont.—An officer of the Pittsburgh & Lake Erie Railway denies the report that a railroad would be built from Fairmont to open up coal land owned by the Little Kanawha Syndicate, connection to be made with the Pittsburgh & Lake Erie Railway. There are no such plans at this time.

W. Va., Moorefield.—A dispatch says that the Hampshire Southern Railroad has completed its extension from Moorefield to Petersburg, and it is now operated through from Romney to that point.

W. Va., Richwood.—The Cherry River Boom & Lumber Co. of Richwood is reported to have begun construction on a railroad six miles long from Richwood to Baxer.

W. Va., Red Jacket.—The Red Jacket Consolidated Collieries Co., according to a press report, is grading for a railroad along Mitchell branch, in Mingo county, to a new coal mine.

W. Va., Wheeling.—The Pittsburg, Steubenville & Wheeling Railroad Co. has been chartered with \$10,000 capital to build a line from Wheeling to a point on the Pennsylvania boundary in Brooke county, West Virginia. The incorporators are W. E. Hildebrand of Pittsburg, Pa.; Homer Gray, H. G. Young, John C. Bond, V. H. Stewart of Charleston, W. Va. Mr. Hildebrand is quoted as saying that the line from Wheeling to Pittsburg will be 54 miles long, or 12 miles shorter than the steam railroad route. His address is Oliver Building, Pittsburg, Pa.

## STREET RAILWAYS

Mo., St. Louis.—The United Railways Co., it is announced, will build an extension of the University Line to Pennsylvania Ave., in St. Louis county. Robert McCulloch is president.

Tex., Dallas.—The Dallas Standard Traction Co., capital \$10,000, has filed charter to build street and interurban railways. Incorporators are E. L. Lancaster, J. B. Martin, R. A. Graves and W. G. Siler.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressor.—Southern Equipment Co., 291 Third-third Ave., North Birmingham, Ala., wants prices on new or second-hand steam-driven air compressor, 1000 feet capacity, to lift water 80 feet.

Asphalt Plant.—City of St. Augustine, Fla., John L. Cray, Street Commissioner, wants prices on asphalt paving plant.

Belting.—W. A. Carver, Rougemont, N. C., wants prices on 110 feet of 4 and 4½-inch second hand belting, butt leather; also 50 feet of 8-inch heavy single leather; also wants prices on 40 to 50 feet of 8-inch 6 or 8-ply rubber belting.

Boiler.—T. J. Spraggins & Co., Fenwick, Miss., want prices on 60-horse-power boiler.

Boiler.—Shipman Organ Co., High Point, N. C., wants prices on second-hand 150-horse-power return-tubular boiler.

Box Machinery.—T. J. Spraggins & Co., Fenwick, Miss., want prices on machinery for manufacturing boxes.

Bricks.—See "Building Materials."

Bridge Construction.—Polk County Commissioners, F. M. Burgess, clerk, Columbus, N. C., will receive bids until November 7 for construction of low bridge over Green River at Womack bridge according to plans and specifications on file or of record as to old bridge which was there.

Bridges.—R. H. Haney, R. F. D. No. 1, Baker, La., wants to correspond with manufacturers of steel bridges for public roads.

Building Materials.—F. B. Hull Construction Co., Jackson, Miss., wants estimates on building materials for city police station.

Building Materials.—J. D. Anders, 23 Essex Bldg., Norfolk, Va., will receive bids not later than October 17 for reinforced concrete, iron, steel and terrazzo floors, etc.

Building Materials.—J. C. Cunningham, Greer, S. C., wants prices on limestone and pressed brick.

Cars.—Jones Purchasing Agency, 1028 Andrus Bldg., Minneapolis, Minn., wants 40 flat cars; length, 41 feet; capacity, 80,000 pounds.

Cement.—U. S. Engineer Office, Wheeling, W. Va. Sealed proposals for furnishing and delivering about 8000 barrels of American Portland cement for dam No. 26, Ohio River, will be received at this office until 11 A. M. October 23, and then publicly opened; information on application; F. W. Alstaetter, Captain, Engineers.

Concrete Bulkhead Wharf.—Sealed proposals will be received at office of City Engineer, Richmond, Va., until 4 P. M. November

1 for specifications, plans and detail drawings for construction of bulkhead wharf on James River; plan and profile site may be examined at office of Charles E. Bolling, City Engineer; bidders advised to examine site; certified check for \$500, payable to City Treasurer; usual rights reserved.

Concrete Mixer.—City of St. Augustine, Fla., John L. Cray, Street Commissioner, wants prices on concrete mixer.

Confectionery, etc.—I. Setton & Co., P. O. Box 888, Cairo, Egypt, wants to correspond with manufacturers of confectionery, starch and sewing cotton.

Copper.—I. Setton & Co., P. O. Box 888, Cairo, Egypt, want to correspond with manufacturers of copper.

Cotton Thread.—See "Confectionery, etc."

Crane.—Samuel T. Williams, 233 North Calvert St., Baltimore, Md., wants three-motor traveling crane, 50 to 60-foot span, 25 tons, and, if possible, 110 volts.

Crossed Piling, etc.—Bids will be received at U. S. Engineer Office, Room M Customhouse, New Orleans, La., until 11 A. M. October 26 for furnishing and delivering crossed piling and walling timber on river bank or wharves in Southwest Pass, Mississippi River; information on application; Lansing H. Beach, Lieutenant-colonel, Engineers.

Crushers.—See "Mining Machinery."

Dredging.—U. S. Engineer Office, Wilmington, N. C. Sealed proposals for dredging in Smith's Creek, harbor at Morehead City and harbor at Beaufort, N. C., will be received at this office until 12 M. November 12, and then publicly opened; information on application; Earl I. Brown, Captain, Engineers.

Earthwork.—U. S. Engineer Office, 3338 St. Charles Ave., New Orleans, La. Proposals for constructing about 36,000 cubic yards of earthwork in Lafourche Levee district will be received until 11 A. M. October 31; information upon application; Robert R. Ralston, Captain, Engineers.

Electric Lamps.—C. C. MacKee Company, No. 4 Queens Rd. Central, Hongkong, China, wants catalogues, prices, samples, etc., on large quantity lots of 10, 16, 25, 32, 50 and 100-candle-power, carbon filament and metallic filament (Osram type preferred) incandescent lamps or bulbs.

Electric-light Plant.—C. T. McCremmon, Miami, Fla., wants prices on electric-light plant for \$16,000 hotel.

Electric-light Plant.—J. A. Corbell, Box 12, Carter, Okla., wants prices on gasoline engine to operate dynamo; current output



for 200 lights complete; dynamo to furnish current for 200 lights; switchboard suitable for above; line wire for wiring houses from dynamo; inside or insulated wire; also 16-candle-power and 32-candle-power lamps with sockets, direct connected or belt connected.

Electric-light Plant.—See "Water-works Equipment, etc."

Electric-light Plant.—See "Water-works, etc."

Electric-light Plant.—City of Osyka, Miss., will open bids November 8 for installation of electric-light plant; will install 30-kilowatt generator and two 500,000-gallon pumps; Xavier A. Kramer, Magnolia, Miss., engineer in charge. (See "Water-works.")

Electrical Machinery.—Aramco Coal Co., E. B. Hubbard, engineer in charge, Logan, W. Va., will need (in next three months) electrical machinery, including power plant, chain machines, motors, etc., for mining.

Electrical Machinery.—Southern Equipment Co., 2601 Thirty-third Ave., North Birmingham, Ala., wants prices on new or second-hand electric generator, belt driven, 100 to 150 kilowatts, alternating current, 2300 volts, 60 cycles, two phase.

Electrical Machinery.—Pennsylvania Equipment Co., West End Trust Bldg., Broad and South Penn Square, Philadelphia, Pa., wants prices on one 43-kilowatt six-pole type 250-volt 30 R. P. M. generator (Westinghouse preferred), direct connected to 11x10 Harrisburg automatic engine.

Engine.—T. J. Spraggins & Co., Fenwick, Miss., want prices on 35 or 40-horse-power engine.

Engine.—Shipman Organ Co., High Point, N. C., wants prices on second-hand 100-horse-power Corliss engine.

Filtration Plants.—Dr. Charles S. Northen, Talladega, Ala., wants to correspond with parties interested in installation of precipitation and filtration plants for water-works.

Flooring Machinery.—Mousson Manufacturing Co., Jarrett, Va., wants catalogues, prices and descriptions of flooring machinery.

Foundry Machinery, etc.—James P. Allen, 1215 South David St., San Angelo, Tex., wants names and addresses of manufacturers of machinery for foundries and blast furnaces, foundry supplies, etc.

Gasoline Engine.—J. A. Corbell, Box 12, Carter, Okla., wants prices on gasoline engine to drive dynamo. (See "Electric-light Plant.")

Glove Forms.—American Laundry Machinery Co., Cincinnati, O., wants to correspond with manufacturers of glove forms.

Grist Mill.—Refuge Cotton Oil Co., M. Stark, manager feed department, Columbus, Miss., wants prices on grist mill; capacity 100 tons of feed and 500 bushels corn meal.

Grading.—Road Board, Nashville, Tenn., will receive bids until 11 A. M. October 29 for grading road 6226 feet long, beginning near Lickton in Twenty-second Road District and extending to Wilkerson Rd.; plans and specifications on file at Lickton Store; bids to be accompanied by certified check for \$50; W. M. Pollard, County Judge; J. H. Lee, Road Commissioner Twenty-second Road District, and J. H. Armstrong, Road Commissioner Twenty-fourth Road District, constitute Road Board.

Grading.—Bids received at office of Chancery Clerk of Warren county, J. D. Laughlin, Vicksburg, Miss., until noon November 7 for widening and grading Pender Hill as per plans and specifications on file in Chancery Clerk's office.

Heading and Stave Machinery.—Fred Turner, 24 Fowler St., Atlanta, Ga., wants prices on equipment (except power plant and drykiln) for manufacturing staves and heads, for nail kegs, from soft pine.

Heating Plant.—Bids will be received until noon October 25 for heating and plumbing systems for Mary St. school building, Cumberland, Md.; plans can be obtained from George F. Sansbury, architect, Cumberland; bids to be accompanied by certified check for 5 per cent. of total bid, payable to A. C. Willson, County Superintendent.

Heating Plant.—Kington Coal Co., W. W. Kington, president, Mortons Gap, Ky., wants prices on heating plant for 20-room hotel.

Heating Plant.—R. G. Vaughn, Greensboro, N. C., wants information on hot water and vapor system of heating.

Hotel Furnishings.—Henry R. Brown, Greeneville, Tenn., wants prices on hotel furnishings.

Hotel Furniture.—C. T. McCremmon, Miami, Fla., wants prices on furniture for \$16,000 hotel.

Ice Machinery.—A. E. Burke, 92 Cedar St., St. Augustine, Fla., wants prices on new or second-hand three or five-ton ice plant.

Irrigation Machinery.—See "Pump."

Iron-furnace Machinery.—James P. Allen, 1215 South David St., San Angelo, Tex., wants names and addresses of manufacturers of machinery for blast furnaces.

Kitchen Equipment.—C. T. McCremmon, Miami, Fla., wants prices on kitchen equipment for \$16,000 hotel.

Lathe.—J. A. Swanton, 7429 Hillman Ave., Birmingham, Ala., wants second-hand lathe, 18 and 24-inch swing and near 6 feet between centers.

Levee Construction.—Proposals will be received by Commissioners of Brazos County Improvement District No. 1, W. W. Loftin, chairman, Allenfarm, Tex., until 1 P. M. November 5 at Terrell's store at Allenfarm, Tex., for construction of about four miles of levee and completion of eight miles of levee partially constructed; proposal sheets, specifications, profiles and map may be obtained from T. H. Batte, Jr., Improvement engineer, 806 Stewart Bldg., Houston, Tex.; copies may also be seen at office of W. W. Loftin, Allenfarm, and office of E. A. Scott, Navasota, Tex., and of Doremus & Butler, Bryan, Tex.; each bid to be submitted upon form furnished by improvement engineer, and be accompanied by certified check, payable to W. W. Loftin, chairman, for 5 per cent. of amount bid.

Levee Construction.—Office Board of Commissioners, Caddo Levee District, Shreveport, La. Sealed proposals will be received by Board of Commissioners until 12 noon November 1 for following levee work in Caddo parish, on Red River, right bank; Upper Rush Point levee, contents 35,000 cubic yards, deposit required \$150; Robson levee, contents 20,000 cubic yards, deposit required \$150; Beal levee, contents 12,000 cubic yards, deposit required \$110; certified check to amounts named as deposit must accompany each bid; usual rights reserved; further information may be obtained at office of State Board of Engineers, New Court-house Bldg., New Orleans, La., or of Levee Board at Shreveport.

Limekilns.—Bromide White Lime Co., F. L. Bloomer, secretary, Lehigh, Okla., wants to correspond with manufacturers of limekilns.

Locomotives.—Jones Purchasing Agency, 1028 Andrus Bldg., Minneapolis, Minn., wants two 20x26 cylinder Mogul engines, short wheel base, 180 pounds or more steam pressure.

Looms.—R. C. Walling, 121 Academy St., Belleville, N. J., wants to correspond with manufacturers of or dealers in new or second-hand silk or cotton looms.

Milking Machinery.—Eugene Lucas, 260 West Broadway, New York, wants names and addresses of manufacturers of cow-milking machinery.

Mining Machinery.—Alaga Mining, Power & Development Co., Birmingham, Ala., contemplates expending \$30,000 to \$40,000 for new washers, tipplers, crushers, steam shovels, trams, etc.

Mining Machinery.—Aramco Coal Co., E. B. Hubbard, engineer in charge, Logan, W. Va., will need (in next three months) mining machinery, including shaking screens, incline equipment, etc.

Paving.—City of Parkersburg, W. Va., C. P. Morrison, president, Board of Affairs, will open bids October 27 for construction of two blocks of brick pavement; amount available \$5000; Ben Stewart, City Engineer.

Paving.—City of Crowley, La., invites bids until November 23 for construction of 33,000 square feet of concrete street crossings; for further information address R. J. Boudreaux, City Clerk.

Paving.—Board of Affairs, Parkersburg, W. Va., will receive bids until 3 P. M. October 27 for paving Market St. from 13th to 16th St. with brick in accordance with plans and specifications on file in office of City Engineer or City Auditor, Frank Good; certified check, \$500; full information, specifications and blank proposal forms may be had from City Engineer or City Auditor.

Paving.—City Clerk, Portsmouth, Va., will receive bids until noon October 31 for regulating and paving such streets in city of Portsmouth, Va., as street committee may determine. Approximate schedule of work to be done is as follows: 71,350 square yards of pavement; 32,544 linear feet of new curb, all granite, or 28,196 linear feet thereof, to be concrete combined curb and gutter, and 4348 linear feet concrete curb; bidders to submit as part of proposal full specifications in detail of pavement proposed under proposal; bids to be on blank form of proposal attached to specifications and be addressed to L. P. Slater, City Clerk, Portsmouth, Va.; to be for completed work as per schedule and no partial bids will be considered. Bids will be received for any of following pavements: Sheet asphalt on concrete foundation; flibertine on concrete foundation; Warren's bitulithic on concrete foundation; Blome Company granitoid block pavement; bitumass on concrete foundation, or any other suitable smooth pavement on concrete foundation as may be selected by street committee; bids for paving to be at price per square yard, and for curbing at price per linear foot; certified check for 5 per cent. of bid to accompany each bid; E. B. Hawks, chairman street committee City Council; S. T. Montague, chairman street committee Board of Awards; V. O. Cassell, Jr., City Engineer.

Plumbing.—C. T. McCremmon, Miami, Fla., wants prices on plumbing for hotel, including 10 bathrooms and 39 to 50 lavatories.

Plumbing.—See "Heating Plant."

Pump.—J. S. Dixon, Egypt, La., wants information and prices on hydraulic pump with power sufficient to irrigate 10 acres of land.

Pumping Engine.—City of Waycross, Ga., J. W. Strickland, clerk of Council, wants prices on triple-expansion condensing pumping engine, 3,000,000 gallons capacity, for water-works; specifications can be had of superintendent of water-works or clerk of Council.

Reinforced Concrete.—See "Building Materials."

Railway Equipment.—See "Mining Machinery."

Rock.—U. S. Engineer Office, 3333 St. Charles Ave., New Orleans, La. Sealed proposals for furnishing about 15,000 tons of rock for New Orleans harbor will be received until 11 A. M. November 5; information furnished upon application; Robert R. Halston, Captain, Engineers.

Safe.—Southern Life Insurance Co., I. Schwarz, president, Texarkana, Ark., wants prices on safe.

Seawall.—Proposals will be received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. November 19 for seawall at United States Navy-yard, Norfolk, Va. Plans and specifications can be obtained on application to bureau or to commandant of Navy-yard named; R. C. Hollyday, Chief of Bureau.

Sewer Construction.—See "Water-works, etc."

Sewer Construction.—Committee on parks of City Council, Parkersburg, W. Va., will receive bids until 8 P. M. October 26 for construction of 24-inch storm sewer to relieve conditions existing in City Park, together with necessary catch basins, manholes and connections, according to plans and specifications on file in office of City Auditor; each bid to be accompanied by certified check for \$100; bids to be addressed to Dr. A. K. Ross, chairman committee on parks; Frank Good, Auditor.

Spool Manufacturers.—J. F. Quisenberry, Buckner, Va., wants to correspond with spool manufacturers or dealers in dogwood.

Sprinkler System.—Thomasville Chair Co., Thomasville, N. C., wants prices on sprinkler system for factory; 60x200 feet; three stories.

Starch.—See "Confectionery, etc."

Steam Shovel.—Eastern Railway Supply Co., 413 American Bldg., Baltimore, Md., wants prices on No. 1 and No. 2-O Thew steam shovel.

Steam Shovels.—See "Mining Machinery."

Sterilizing Plant.—Sealed proposals will be received in triplicate until 11 o'clock November 15 at office of Constructing Quartermaster, Fort Oglethorpe, Ga., and then opened, for construction of sterilizing plant; necessary blank forms, specifications, etc., furnished on application to George Vidmer, Captain Eleventh Cavalry, Constructing Quartermaster.

Steel.—J. W. Barrett & Son, Trenton, Tenn., wants prices on steel for store building.

Steel.—See "Building Materials."

Steel Shafting.—William Walker Jones, 511 Tucker Bldg., Raleigh, N. C., wants prices on 200 to 3000 feet of hollow steel shafting; to be in lengths of 20 feet each and each end to have male threads and one end of shaft to have female threads similar to pipe couplings used on wrought iron; shafts to be 20 feet long, 12 inches in diameter and 1 inch thick, to stand 60,000 pounds tensile strength where coupled together.

Terrazzo Flooring.—See "Building Materials."

Tinplates.—I. Setton & Co., P. O. Box 888, Cairo, Egypt, want to correspond with manufacturers of tinplate.

Tipplers.—See "Mining Machinery."

Wall, etc.—Office of Quartermaster, U. S. Army, 416 Hibernal Bldg., New Orleans, La. Sealed proposals in triplicate to be re-

ceived until 11 A. M. November 11 for constructing brick wall, furnishing new iron gates, etc., at Chalmette, La., National Cemetery; information on application; George B. Davis, Lieutenant-Colonel, D. C. G., U. S. Army, Acting Quartermaster.

Washers.—See "Mining Machinery."

Water System, etc.—C. T. McCremmon, Miami, Fla., wants prices on water system and pumping plant for \$16,000 hotel.

Water-works.—See "Filtration Plants."

Water-works, etc.—James A. Wellons, Mayor, Smithfield, N. C., will receive bids until 7:30 P. M. November 1 for construction of water-works, sewer system and electric-light plant; plans and specifications on file in Mayor's office.

Water-works.—City of Osyka, Miss., will open bids November 8 for construction of water-works and electric-light plant; to include construction of reservoir, 40,000 gallons capacity; steel tank, 50,000 gallons capacity; installing 30-kilowatt generator and two 500,000-gallon pumps; Xavier A. Kramer, Magnolia, Miss., engineer in charge of construction; cost about \$20,000; plans and specifications at office of Mayor and Engineer, who will furnish synopses.

Water-works.—Sealed proposals addressed to Board of Affairs, Parkersburg, W. Va., will be received at office of City Auditor until 8 P. M. October 25, and then opened and publicly read by Board of Affairs and Water-works Commission; contracts No. 7, 8, 9, 10 and 11; No. 7 provides for superstructure for pumping station; No. 8 provides for radial brick chimney; No. 9 provides for laying cast-iron water pipe; No. 10 provides for cast-iron water pipe and special castings; No. 11 provides for gate valves and boxes, check valves and air valves; certified checks, payable to City Treasurer, to accompany each proposal; No. 7, \$500; No. 8, \$100; No. 9, \$500; No. 10, \$200; No. 11, \$50; for bidding blanks and specifications address Frank Good, auditor; C. P. Morrison, president of board. (Recent item by error under "Paving.")

Water-works Equipment, etc.—Board of Public Works, C. W. Deen, chairman, Lakeland, Fla., will receive bids 12 M. November 19 for furnishing approximately three miles of 10, 6 and 4-inch cast-iron pipe, fittings, hydrants, valves and boxes, compound engine, pump, generator, exciter, switchboard, air compressor, construction of power plant and reservoir, installing machinery and constructing foundations; specifications may be had of H. L. Swatts, secretary; plans will be on file and can be seen at office of engineer; each bid must be accompanied by certified check for 5 per cent. of amount of bid; usual rights reserved; Wm. W. Lyon, consulting engineer, 35 Duval Bldg., Jacksonville, Fla.

Welding Plant.—C. E. Harris, 200 Dallas St., Waco, Tex., wants names and addresses of manufacturers of and dealers in welding plants.

Wireworking Machinery.—Texarkana Shingle Crosscutting Co., J. G. Katy, president, Texarkana, Ark.-Tex., wants prices on a number of machines for tying bundles of shingles, 10x12 inches, with wire.

Woodworking Machinery.—Mousson Manufacturing Co., Jarrett, Va., wants catalogues, prices and descriptions of 16x6 or 20x6 single planers and matcher and of flooring machinery.

Woodworking Machinery.—See "Heading and Stave Machinery."

Woodworking Machinery.—W. A. Carver, Rougemont, N. C., wants prices on double lathe and self-feed return saw and gang edger.

#### An Efficient Light and Water Plant.

As emphasizing the necessity of employing competent engineers for designing, constructing and operating municipal and other plants, in order to obtain efficient and economical service, the new water-works and electric-light and power plant of Macon, Miss., is a notable example. This plant has been remodeled after plans and specifications by G. B. Baskerville, Jr., B.E., designing, constructing and operating engineer, Macon, Miss., and did not suspend operations during its reconstruction. Its cost was \$14,750, whereas the lowest bid, based upon plans and specifications previously prepared in New Orleans, called for an expenditure of \$21,000, not including the engineering fee. Besides this and other savings in construction, the plant has since been operated under the supervision of Mr. Baskerville at a profit, and its receipts have been increased \$500. Parties desiring the services of an experienced and technically-trained engineer are invited to address Mr. Baskerville relative to their needs.

## INDUSTRIAL NEWS OF INTEREST

### Secures Big Brick Contract.

It is announced that the Thornton Fire Brick Co., whose offices are at Grafton, W. Va., and plant at Thornton, has secured a contract for 7,000,000 brick to be used in the construction of the Kingwood tunnel for the Baltimore & Ohio Railroad Co.

### Will Invest in Southern Enterprise.

A Baltimore business man will consider a proposition to invest some money in a remunerative Southern enterprise where the location is healthful. Details and references may be addressed to Richard James, 1412 Harlem Ave., Baltimore, Md.

### Wants a Hoisting Engineer.

A Little Rock company wants to engage a hoisting engineer to operate a full-swing derrick crane with clamshell bucket for handling sand and gravel. One who would invest to some extent in the plant is especially invited to correspond. Address "Hoisting Engineer," care of Manufacturers Record.

### Of Interest to Cotton Manufacturers.

An experienced Southern cotton manufacturer is desirous of becoming connected with a Southern company with which he can make arrangements to become treasurer and manager. He is now engaged with a large mill enterprise, and is prepared to invest in any plant in which he becomes interested. Letters addressed to No. 694, care of Manufacturers Record, will be forwarded.

### A Southern Contractor's Activities.

That the activities of Southern contractors are not limited to their own section is evident by various announcements from time to time. A recent instance of this is the statement that D. J. Phipps of Newport News, Va., has been notified he is the lowest bidder on the erection of a \$160,000 school building at East Orange, N. J., and a \$60,000 postoffice building at Fairbury, Neb.

### Winterer's Machinery Lists.

Making a specialty of purchasing and dismantling large plants, Herman L. Winterer, 508-510 Beach St., Philadelphia, also purchases modern machinery of various kinds and rebuilds second-hand equipment for efficient service. He is distributing lists of the machinery he handles, including engines, boilers, dynamos and motors, pumps, heaters, machine tools, pulleys, shafting, hangers, belting, mill supplies, etc.

### Change in Its Chicago Office.

Announcement was recently made in this column that the Triumph Electric Co. of Cincinnati had made a change in the address and management of its Chicago office, 375 La Salle St. being given as the address. This should have been 275 La Salle St. W. K. Bonham succeeds F. L. Merrill as manager and will handle the company's products, including Triumph electric-light and power machinery, in his territory.

### For Oklahoma and Western Arkansas

Hughes, De Forest & Mulch, 410 Oklahoman Building, Oklahoma City, Okla., have been appointed representatives of the Atlantic Terra-Cotta Co., 1170 Broadway, New York, and the Atlanta Terra-Cotta Co., East Point, Ga. They will represent these companies in Oklahoma and Western Arkansas, and will supply estimates for any work in architectural terra-cotta.

### Secures Important Contracts.

In connection with the erection of large warehouses and storage tanks in St. Louis for the Texas Company, main offices Houston, Tex., the Steel Roof Truss Co., 618 New Bank of Commerce Building, St. Louis, has been awarded contracts for all-steel trusses to be used in the structures. This company is also supplying steel for the fireproof storage sheds which the Waters-Pierce Oil Co. is erecting to replace storage sheds recently burned.

### Richmond Electric Motors.

Devoting all its activities to the manufacture of alternating-current motors and generators, the Richmond Electric Co., Richmond, Va., asserts its ability to produce machines, high grade in every feature, and market them at a price as low as possible without sacrificing their valuable qualities. In appreciation of the increasing demand for a satisfactory variable-speed polyphase, alternating-current motor, the company has produced a full line of machines of this character in sizes from 1/4 to 75 horse-power, inclusive. These motors are adapted to operate printing presses, machine tools, freight and passenger elevators, cranes, hoists, ven-

tilating fans, etc. The company is distributing bulletin No. 12, illustrating and describing its squirrel-cage induction motors, and bulletin No. 13, illustrating and describing its slip-ring type polyphase motors.

### Building Materials of All Kinds.

Among Southern supply companies for all kinds of building materials is the Southern Building Material Co., main office Arcade Building, Norfolk, Va. Products which this company handles include ornamental terra-cotta, pressed brick in all colors, enameled, paving and building brick, fireproof doors and windows, hollow tile, steel reinforcing, expanded metal, steel lath, corner bead, structural steel, ornamental iron, mail chutes, slate, roofing tile, cement, plaster and lime, mortar color, etc.

### Dixie Office Equipment.

For the reason that office equipment helps or hinders in doing good work, it is much more satisfactory and profitable to employ such tools as may always be relied upon for efficient service. Office equipment of this character, it is claimed, is manufactured by the Dixie Seal & Stamp Co., Atlanta, Ga., and includes cushioned rubber stamps, rubber type, pads, daters, ink, stencils, brushes, wax, notary and corporation seals, office supplies, numbering machines, check protectors, metal checks, metal badges, enamel and porcelain signs, etc.

### Automobile Makes Fast Time.

Driving his "Everitt 30" from Pittsburgh to Baltimore in actual running time of 11 hours and 31 minutes, it is said that Clinton R. Foutz of Baltimore holds the record of time between these two cities. Part of the road over which the trip was made is rough and rocky, but the entire distance of 246 miles was made without any tire trouble, owing, it is said, to the light weight of the car and the use of Republic staggered tread cases. The Pullman Automobile Co., 11-17 Cathedral street, and 1893 Lovegrove alley, Baltimore, is now making deliveries of 1911 Everitts, and will supply information concerning them.

### Appointed Southwestern Representative.

C. H. Peterson, who has been connected with the Chicago office of the Baldwin Locomotive Works and the Standard Steel Works Co., main offices at Philadelphia, has been appointed Southwestern representative of these companies, with an office at 914 Security Bldg., St. Louis. Edward B. Halsey, who has been in charge of the St. Louis office, has been transferred to the sales department of the Philadelphia office.

### Will Handle Building Supplies.

For the purpose of handling building materials and supplies of various kinds, the Wainwright Supply Co. has established offices at 415-16 Dickson Bldg., Norfolk, Va. H. I. Wainwright, formerly of Wainwright, Jackson & Co., will be in active charge of the company, which will handle roofing tile, slate in all colors, plaster ornaments, cement, lime, plaster, crushed stone, gravel, sand, terrazzo, tile, marble, corner bar, expanded metal, steel lath, structural steel, ornamental iron, pressed brick, etc.

### Installing Northern Equipment.

In connection with new additions to its plant the Kewanee Boiler Co., Kewanee, Ill., is installing four electric traveling Northern cranes, manufactured by the Northern Engineering Works, Detroit. These cranes are of alternating-current Northern type "E" design, ranging in capacity from 5 to 15 tons and 55-foot span. Other installations of Northern equipment include a No. 42 Newton patent cupola in the foundry of Little Bros., Port Huron, Mich., and two Northern cranes and a No. 60 Newton patent cupola in the new foundry of the Power Specialty Co. at Danville, N. Y.

### Foos Engines for Government.

The success of two installations of large Foos vertical gas engines by the U. S. Government in the Ohio River improvement work has led to the placing of another order with the Foos Gas Engine Co., Springfield, O., for six engines, four of which are 100 horse-power each, of the three-cylinder vertical type, which will embody the new features of the Foos design. This order will be divided and shipped to two different points, where the engines will be used in the operation of locks which the Government is building in the Upper Ohio Valley to provide sufficient water for continuous freight navigation. The lock at each dam is operated by compressed air furnished by compressors

belting direct to each of the 100 horse-power Foos units. Each engine will be capable of developing 100 horse-power continuously, and under rigid specifications regarding speed regulation, fuel economy, reliability, ease of handling and quickness of starting. While it is only an incident that the Foos factory methods and type of engine which have been continuously improved for 24 years should meet the exacting requirements of Government engineers, it is creditable that a standard type of Foos engine should be accepted and meet fully the rigid requirements of the Government for this work without alteration or change.

## TRADE LITERATURE.

### Grits and Grinds.

Grits and Grinds, a bulletin on grinding and grinding wheels, has been issued for September by the Norton Company and the Norton Grinding Co., Worcester, Mass. This publication is illustrated and presents timely information regarding grinding and grinding devices.

### Creosoted Shingles.

The Texarkana Shingle Creosoting Co., Texarkana, Tex., is treating pine and cypress shingles under the Paty process, which is claimed to preserve them indefinitely. A pamphlet which the company is distributing describes this method of treatment and presents testimonials as to its efficiency.

### The Banner Mazda Lamps.

An electric lamp which is claimed to be highly efficient and economical is the Banner Mazda lamp, manufactured by the Banner Electric Co., Youngstown, O. This lamp is said to give three times the illumination of a carbon filament lamp at the same cost of current, and is described and illustrated in a pamphlet which the company is distributing.

### Cotton Chats for September.

Cotton Chats No. 95, for September, has been issued by the Draper Company, Hopedale, Mass., and is devoted to illustrations of houses occupied by the Draper Company's employees. A large view on the first page of the publication is reproduced from a sky photograph, while the smaller illustrations present views of houses with attractive surroundings.

### Buffalo Power Pumps.

In sectional catalogue No. 229, illustrating and describing Buffalo power pumps, an endeavor has been made to list all usual types of power pumps as are used in ordinary service. These include single, duplex and triplex pumps of various designs adapted to many kinds of work. Buffalo power pumps are manufactured by the Buffalo Steam Pump Co., Buffalo, N. Y.

### Safety Heating and Lighting News.

In order to present to railroad men subjects of interest relating to lighting and heating railroad cars, etc., the Safety Car Heating & Lighting Co., 2 Rector St., New York, has issued the first number of a publication entitled the Safety Heating and Lighting News. This journal contains interesting and timely information, and illustrates various equipment which the Safety Car Heating & Lighting Co. manufactures.

### Ragland Wants Factories.

William T. Brown of Ragland, Ala., is circulating an attractive booklet with illustrations showing what his city has accomplished in the way of manufacturing and its opportunities in that line and in agriculture, and calling attention to the need of a rolling mill, paper mill, a sash, door and blind factory, a stove factory, an oil mill, a cotton gin, an ice factory and plants to manufacture buggy rims, spokes and axle handles and terra-cotta pipe.

### The Universal Monthly Bulletin.

Monthly bulletin No. 77 for October has been issued by the Universal Portland Cement Co., Chicago, Pittsburg and other cities. Among other features, it directs attention to the large quantity of cement being used by progressive farmers for erecting permanent improvements, including the construction of sidewalks, silos, troughs, fences, foundations, floors, steps, etc. The publication also presents interesting illustrations, with descriptive data, of various structures in which Universal Portland cement was used.

### Yoakum Inviting Enterprise.

Located in the heart of South Texas, with excellent railroad facilities, favorable climate, fertile soil and other advantages, Yoakum offers an inviting field for manu-

facturing enterprises and other industries. A folder presenting 17 views and representing as many local scenes is being distributed by the secretary of the Commercial Club, Yoakum, who will supply information regarding the town and vicinity and the opportunities they offer for the establishment of profitable industries.

### Composite Telephone and Telegraph System.

The Western Electric Co., 463 West St., New York, has issued booklet T-206, describing its composite telephone and telegraph system for railway service. This system has been devised for the purpose of enabling telephone and telegraph messages to be transmitted simultaneously over grounded telegraph lines. The booklet contains 54 pages and presents illustrations of telephone sets, howlers, coils, condensers, protectors, batteries, line poles and a dozen circuit diagrams. It has been issued in convenient handbook size, and its contents are protected by copyright.

### Vulcan Hoisting Engines.

The advanced development of the mining industry, especially in the anthracite coal fields, is largely dependent upon the hoisting engine. The safety of the men employed in the mines, as well as the output of the colliery, depend upon the mechanical construction of the engines used, and in developing these engines to a high state of efficiency the Vulcan Iron Works, Wilkes-Barre, Pa., has played an important part. This company manufactures hoisting and hauling engines, safety cages, return tubular boilers, mine ventilating fans and other colliery equipment. Its products are illustrated and described in an attractive catalogue which it has recently issued.

### Commercial and Folding Type Mazdallers.

Bulletin No. 9535, describing Hawthorn commercial and folding-type mazdallers, has been issued by the Western Electric Co., 463 West St., New York. Mazdallers are lighting fixtures which have been developed since the advent of the Mazda (tungsten) lamp into the field of commercial lighting, and are so designed as to carry, support and protect this lamp. The new bulletin describes the construction of the Hawthorn type of mazdallers, presenting illustrations of the various types of fixtures. A portion of it is also devoted to the anti-jar link suspension, which is described as a simple, effective means of protection against jar and vibration. The bulletin contains cuts of mazdallers and diagrams of their construction and of mazdaller units.

### Switchboards for Power and Light.

It is stated that the switchboard has come to be regarded as the keynote of the electrical installation, and that a well-designed and well-built switchboard is an economy which should not be neglected. First cost may well be lost sight of if low cost of maintenance is secured thereby, because first cost is usually forgotten, while high maintenance charge is an ever-present expense. The difference in cost between a well-designed and well-built switchboard and one in which details are slighted, as a rule, is comparatively trifling, but the difference in results may be great. A manufacturing company which devotes its entire attention to this one branch of the electrical industry is the Walker Electric Co., factory and general offices at Noble and 24th Sts., Philadelphia. This company supplies designs by competent engineers of experience, and to furnish equipment selected for its merit and best suited for each particular installation. It states that the workmanship which it supplies is by mechanics trained for each different operation, and that its sales engineers are only interested in switchboards of merit. The company has issued an attractive catalogue, durably bound, illustrating and comprehensively describing the various types of switchboards which it manufactures, and presenting views of prominent installations. It maintains branch offices in the Park Bldg., Pittsburg; 30 Cortlandt St., New York; 84 State St., Boston, and in the Monadnock Block, Chicago.

## OBITUARY.

### Death of George Poole.

The Poole Engineering & Machine Co., Baltimore, announces the death of its president, George Poole, which occurred on the 24th of September. Mr. Poole was prominent in industrial circles and well known among manufacturers and dealers of machinery of all kinds.



**NOT A NEW MATERIAL.****The History and Development of Reinforced Concrete.**

Mr. H. Kempton Dyson, secretary of the Concrete Institute of England, recently delivered a lecture on "The History and Development of Reinforced Concrete," in which he remarked, according to a report of it in the *London Iron and Coal Trades Review*, that it was only within recent years that reinforced concrete as a method of construction had come into prominence, though the subject, however, was not entirely new, because it was over 50 years since attention began to be directed by inventors thereto, and, indeed, reinforced concrete, of a kind, had been known for ages past. The roof of a tomb constructed by the Romans 100 years or more B. C., situated on the Via Appia, had been found to consist of a slab of lime concrete, in which bronze rods were placed, crossing each other to strengthen or reinforce it. The Romans reinforced concrete in other ways, by timber and tiles, while at one point it had been found that the Great Wall of China on a bad subsoil was built on a kind of concrete raft in which timber, reeds and rushes were embedded to strengthen it. In the Middle Ages timber was frequently employed to reinforce rubble concrete walls.

The first suggestion of an idea of reinforcing concrete in modern times, the lecturer continued, seems to have been a statement in J. C. London's "Encyclopedia of Cottage, Farm and Village Architecture," published in 1830, in which it was suggested that flat roofs might be constructed of a lattice-work of iron tie-rods thickly embedded in cement and cased with flat tiles. In 1840 two systems of floor construction were employed in Paris, known as the "Vaux" and "Thuauc" systems. The former consisted of round rods, closely spaced, hooked over flat wrought-iron bars placed on the edge some distance apart and embedded in a slab of plaster-of-paris concrete, while the latter employed small iron joists with hangers or stirrups placed over them in which round rods were suspended, placed in holes in the stirrups.

The first real inventor of reinforced concrete in the modern sense seems to have been W. B. Wilkinson, a plasterer of Newcastle-on-Tyne, who took out a patent for floors and beams of the same in 1854. M. Francois Coignet, a Paris contractor, took out a patent in 1855 for reinforcing slabs with a network of iron rods, and a M. Lambot, another French contractor, proposed the construction of ships by means of concrete with an embedded skeleton of wire; he constructed a punt of the kind which was shown at the Paris Exhibition of 1853, and is still in service at a pond at Miraval, where he resided. The development of the subject was extended by numerous other inventors, but the "Hennebique" system has been chiefly responsible for a great deal of the development in this country in recent years. There have been many systems invented subsequently, over 70 being upon the market in Europe and America today. Reinforced concrete is now used for the following: Beams and slabs, cantilevers, arches, columns, piles, pipes, masts, telegraph, tramway and electric-light poles and standards, reservoirs, barges, boats, punts, pontoons, caissons, ordinary walls, retaining walls, fence and fence posts, clothes posts, hitching posts, paths and pavements, cowhouses, pigeries, greenhouses, sheds, warehouses, offices, churches, houses, etc.; railway sleepers, chimney shafts, sea protection walls and groynes, tables, window frames, safes, strong rooms, garden seats, cabinets and other furniture—yea, even tombstones and coffins. Reinforced concrete possesses the advantages of strength, durability, freedom from continual painting and up-

keep, hygiene, fire resistance, freedom from vibration, and economy.

**Winston-Salem.**

In his comprehensive report to the Board of Trade of Winston-Salem, N. C., Secretary J. S. Kuykendall showed that in the year ended October 1, 1910, there were invested in new buildings in that city \$2,040,025, an increase over 1909 of \$1,038,175. Of the total amount, \$1,189,150 represent investments in manufacturing plants, \$340,400 in business houses, \$82,100 in churches and schools, \$388,375 in dwellings, of which 379 were erected, or at the rate of more than one a day, and \$40,000 in hotels. Bank deposits aggregated \$6,674,876, a gain of \$2,401,878, and the value of manufacturing tobacco was \$21,811,469, a gain of \$3,631,469. The assessed value of real and personal property is now \$12,752,806, a gain over 1909 of \$1,141,888.

**Greenville, S. C.**

Secretary E. B. Adams of the Board of Trade of Greenville, S. C., in his comprehensive annual report presents a mass of statistical information of great value to intending investors or homeseekers and showing an increase of 135.85 per cent. in the value of buildings in Greenville county between 1900 and 1909; of 77.45 per cent. in the value of real estate in the cities, towns and villages of the county; of \$2.6 per cent. in the value of total taxable property in the county in the same period. In 1909 permits for new buildings representing \$525,252 were granted at Greenville.

**Fort Worth, Tex.**

In 10 years the increase of 174.7 per cent. in the population of Fort Worth has been accompanied by an increase from \$21,000,000 to \$54,000,000 in assessed value of property; from \$89,500 to \$2,288,700 in live-stock receipts; from \$500,000 to \$75,000,000 in annual packing-house trade; from \$2,663,045 to \$4,600,000 in factory capital, besides packing-houses; from \$1,789,955 to \$6,156,256 in banking resources, and from \$3,724,369 to \$20,000,000 in deposits in banks, according to an interesting circular by Paul E. Palmer of the Board of Trade of that city.

**Southern Corn.**

In the corn-growing contest in Orangeburg county, South Carolina, M. C. Edwins produced 159 bushels to the acre, J. H. Ayers 121 bushels and Julius E. Gramling 116 bushels.

The Barclay brothers raised on their farm near Jackson, Ga., 137 bushels of corn to the acre.

**Improvements to Cost \$300,000.**

The Atlantic Ice & Coal Corporation of Atlanta will increase the capacity and efficiency of its plants at Atlanta, Chattanooga, Rome, Augusta, Jacksonville, Macon, Albany and Columbus at a cost of about \$300,000. Plans are being prepared, and most of the machinery and building materials have been purchased.

**Steel Rail Sales.**

[Special Dispatch to Manufacturers Record.] New York, October 19.

During the week the sales of steel rails by the United States Steel Corporation were 750 tons by the Tennessee Company and 10,900 tons by the Illinois Steel Co.

The Consolidated Phosphate Co. has completed its plant at Dublin, Ga., and is operating it to a capacity of 100 tons of acid phosphate per day, which will soon be increased to 150 tons per day. Izzie Bishinski is president and manager of the company.

**SIXTEENTH ANNUAL REPORT**

OF THE

**SOUTHERN RAILWAY COMPANY**

Year Ended June 30, 1910.

Washington, D. C., October 6, 1910.

To the Stockholders of the Southern Railway Co.:

The Board of Directors submit the following report of the affairs of the Company for the year ended June 30, 1910:

**INCOME STATEMENT.**

	1910. 7,050.17	1909. 7,170.36	Inc. or Dec. Dec. 120.19
Miles of road operated, average.....	857,294.58 54	852,188,106 64	Inc. \$5,106,401 70
Gross operating revenues.....	38,655,745 91	35,538,980 60	Inc. 3,096,765 34
Total operating expenses.....	18,658,762 40	16,619,126 04	Inc. \$2,039,636 36
Net operating revenue.....	18,980 26	136,963 39	Dec. 117,983 03
Outside operations—net revenue.....	18,677,742 76	16,755,089 43	Inc. \$1,921,653 33
Net revenue.....	1,979,722 33	1,916,701 65	Inc. 63,020 68
Taxes accrued.....	16,688,020 43	14,839,387 78	Inc. \$1,858,632 65
Operating income.....	3,179,155 72	2,898,311 79	Inc. 280,844 02
Other income.....	19,877,156 15	17,737,699 48	Inc. \$2,139,456 67
Total gross income.....	11,313,686 11	11,314,538 85	Dec. \$852 74
Interest on funded debt and equipment obligations.....	2,806,451 43	2,833,775 21	Dec. 27,323 78
Other deductions from total gross income.....	14,120,137 34	14,148,314 06	Dec. 28,176 52
Total deductions.....	55,757,018 61	53,589,355 42	Inc. \$2,167,663 19
Balance of income over charges.....	52,372 91	78,285 18	Dec. 25,912 27
Additions and betterments.....	5,794,645 70	5,511,100 24	Inc. \$2,183,545 46
Balance carried to credit of Profit and Loss.....			

There was at the close of this fiscal year a balance to be absorbed of \$7,684,604.46 in discount on securities, resulting principally from the large sales of Development and General Mortgage bonds in the year ended June 30, 1909. In transferring the balance of income over charges for the year ended June 30, 1910, to the credit of Profit and Loss, the Board of Directors deemed it proper to charge \$2,831,459.89 of this discount to Profit and Loss, thus reducing the amount still to be absorbed to \$4,853,144.57. The net balance remaining to the credit of Profit and Loss as of June 30, 1910, after such credit and debit was \$8,685,959.91. (See Table 4, page 28, of the pamphlet report.)

This discount is being charged off partly by proportionate charges to Income during the life of the securities, and partly by extraordinary charges to Profit and Loss. The charge to Profit and Loss this year will result in substantial reductions in such charges to Income during subsequent years in disposing of the balance now in the account.

Statements of the accounts and statistics of the Company, in the usual detail, will be found in the tables hereto annexed.

The accounts have been examined, as usual, by Certified Public Accountants, Messrs. Patterson, Teale & Dennis, and their certificate is made a part of this report.

**THE OPERATING CONDITIONS.**

The income statement reflects the improvement in business during the year. Freight revenues increased 11.97 per cent., passenger revenues 9.92 per cent., and total operating revenues 10.90 per cent. The gross operating revenues were the largest in the history of the Company. But while this is gratifying, it must be observed, on the other hand, that the increase in total operating expenses during the year almost kept pace with the increase in revenues, being 9.91 per cent. The operating ratio, excluding taxes, was, however, 67.43 per cent., as compared with 68.04 per cent. last year and 76.01 per cent. in 1907, the improvement in the three years being largely the result of the improved transportation conditions under the wage scale heretofore in effect. The property has been well maintained during the year, and is in as good physical condition as is necessary, not only for the preservation of the integrity of the capital account, but also to make possible efficient operation. Insistent effort to increase efficiency in operation has been made, looking especially to maintaining a reasonable ratio between transportation expenses and gross revenue. The continued high cost of all the materials and supplies which a railroad consumes, and the increased cost of labor, without any proportionate increase in the selling price of the one thing the railroad produces and has for sale, viz., transportation, has so intensified the problem of successful railroad operation that the opportunity for good results is narrowed under existing conditions to efforts to increase the volume of business and improvement in operating efficiency.

Particular attention is invited to the General Manager's report hereto annexed, for a statement of some of the most important results which have been accomplished during the year in those respects.

Late in the year general increases were made in the rates of pay of employees, which will have the effect of adding approximately \$2,000,000 to the annual pay roll of the Company.

**THE CAPITAL ACCOUNT.**

Important changes have taken place in the capital account during the year. The property investment has been increased \$14,061,558.29, of which \$3,923,793.70 was in road and \$10,137,964.59 was in equipment. The increase in the road account was due to additions made during the year (see page 20 of the pamphlet report), but the increase in the equipment account is largely a readjustment made necessary to better meet the requirements of the new uniform system of accounting prescribed by the Interstate Commerce Commission. There were, however, actual net additions to equipment during the year costing \$844,772.15. (See page 21 of the pamphlet report.)

Equipment obligations amounting to \$2,528,402.48 matured and were paid during the year. On April 1, 1910, a new equipment trust (Series N) was created, under which equipment costing \$6,532,535 was contracted for, and new equipment obligations amounting to \$5,200,000 were issued and sold, the balance of cost being paid in cash. This increase in equipment obligations brought the total of such obligations outstanding on June 30, 1910, to \$18,208,791.84, which is \$2,368,605.13 less than the total of such obligations outstanding on June 30, 1907. In the three years since June 30, 1907, there have matured and been paid equipment obligations amounting in all to \$9,324,911.30, or more than the total of the new obligations now assumed. This reduction in the amount of contracted and fixed obligations for the purchase of equipment, which must be financed currently, and the necessity of additional engines and cars of larger

power and capacity to handle an increased volume of business with reasonable economy, were the justifications for the creation of the Equipment Trust, Series N.

#### THE FUNDED DEBT.

On January 1, 1910, there were drawn and taken into the Treasury \$5,000,000 of Development and General Mortgage bonds, which, under the terms of that mortgage, could be so drawn to reimburse the Treasury for its advances made for construction during the calendar year 1910. In like manner there were drawn and taken into the Treasury during the fiscal year \$1,756,000 of Development and General Mortgage bonds to reimburse the Treasury for the proportion of equipment obligations paid during the year, which, by the terms of the Development and General Mortgage, was to be charged to capital account.

By reason of these drawings the total amount of Development and General Mortgage bonds free in the Treasury on June 30, 1910, was \$7,536,000.

On November 1, 1909, the Three-Year Convertible Six Per Cent. Notes of 1911, amounting to \$11,105,000, were redeemed. These notes were the outstanding balance of the entire issue of \$15,000,000, which were called during the spring of 1909, when the debt was permanently financed in the manner explained in the annual report for the year ended June 30, 1909.

On February 1, 1910, the \$15,000,000 of Three-Year Five Per Cent. Notes which were issued in 1907 matured and were redeemed. Of this debt, \$5,000,000 was paid off in cash with treasury funds, and the balance was renewed by the creation and issue of \$10,000,000 of new Three-Year Five Per Cent. Notes, due February 1, 1913.

On January 1, 1910, there matured the three issues of bonds of the Atlanta & Charlotte Air Line Railway Co., amounting in the aggregate to \$5,500,000. These bonds had been extended from time to time in the past, and during the last three years had borne interest at the rate of 4½ per cent. The contract by which this Company operates the property of the Atlanta & Charlotte Air Line Railway Co. provides for a perpetual right of possession and operation of that property, conditioned, among other things, upon the payment of the interest upon this bonded debt. Provision was accordingly made in the First Consolidated Mortgage for the acquisition of these bonds, and the maturity on January 1, 1910, was financed by the purchase of all the Atlanta & Charlotte Air Line Railway Co. bonds, which were thereupon further extended at 4½ per cent. for 10 years, or until January 1, 1920, and as so extended were pledged under the First Consolidated Mortgage against the issue and delivery of a like amount, at par, of First Consolidated Mortgage Five Per Cent. Bonds reserved in the custody of the Trustee for that purpose. \$5,000,000 of the First Consolidated Mortgage Five Per Cent. Bonds so issued were sold at a price approximately sufficient to reimburse the Treasury for the cost of the acquisition of the \$5,500,000 Atlanta & Charlotte Air Line Railway Co. bonds, thus leaving free in the Treasury of the Company \$500,000 of First Consolidated Mortgage Five Per Cent. Bonds.

On January 1, 1910, there matured the \$400,000 of First Mortgage Five Per Cent. Bonds of the Richmond, York River & Chesapeake Railroad Co. These underlying bonds upon property of this Company were redeemed with treasury funds, and a like amount of First Consolidated Mortgage Five Per Cent. Bonds which had been reserved in the custody of the Trustee against such redemption were issued and taken into the Treasury.

On July 1, 1909, there matured the balance of \$282,500 of the Charlotte, Columbia & Augusta Railroad Co. First Mortgage Five Per Cent. Bonds, Extended, which had not previously been acquired by this Company in exchange for First Consolidated Mortgage Five Per Cent. Bonds under the provision in that respect of the First Consolidated Mortgage. These matured bonds were redeemed by this Company with treasury funds, and there were issued and placed in the treasury to represent the disbursement a like amount of First Consolidated Mortgage Five Per Cent. Bonds.

By reason of these refunding operations and the sinking funds in respect of the underlying bonds upon the Charlottesville & Rapidan Railroad and the Franklin & Pittsylvania Railroad, there were taken into the Treasury in all during the year First Consolidated Mortgage Five Per Cent. Bonds aggregating \$1,212,500, which, with the \$655,300 of such bonds previously held in the Treasury, amount to \$1,867,800 of Southern Railway First Consolidated Mortgage Five Per Cent. Bonds, which were free in the Treasury on June 30, 1910.

Advantage was taken of market conditions during the year to acquire a number of the underlying 6 per cent. bonds the maturity of which is approaching. These acquisitions

were made by the issue in exchange on an agreed basis of First Consolidated Mortgage Five Per Cent. Bonds reserved for that purpose. The underlying bonds so acquired and retired, with a consequent immediate saving in the interest charge, were:

Columbia & Greenville first 6s of 1916.....	\$27,000
Richmond & Danville Consolidated 6s of 1915.....	194,000
Virginia Midland Serial 6s of 1911.....	271,000
Western North Carolina Consolidated 6s of 1914.....	56,000

The result of all these financial operations in respect of the funded debt has been that, despite the accrual this year of a full year's interest on the \$41,330,000 of Development and General Mortgage bonds issued during the year ended June 30, 1909, the amount paid for interest on Funded Debt and Equipment Obligations was less in the year ended June 30, 1910, than in the previous year, as will be noted from the Income Statement.

The net increase of \$29,147.26 in the charges accrued during the year for Interest on Funded Debt, Equipment Obligations and Rents Accrued for Lease of other Roads, which items include all the Company's fixed charges as stated on page 26 of the pamphlet report, was due to an arbitrary increase during the year of \$30,000 in the rental paid the Atlantic & Danville Railway Co. under the provision of the lease made in 1899.

#### CONSTRUCTION.

No new construction of importance was undertaken during the year, but the work in progress as described in the last annual report has been prosecuted.

The benefit expected to be derived from the operation of the revised line through Lynchburg, Va., was postponed by a disastrous fire in the new tunnel while still incomplete and in charge of the contractor. This delayed the completion of the work beyond the time predicted, but it is now expected that the new double-track line through Lynchburg from Monroe, Va., to Sycamore, Va., 38.14 miles, will all be in operation by this fall.

The double track operated on the main line has been increased during the year by the completion of the second track between Spencer, N. C., and Concord, N. C., 24.07 miles; between Harrisburg, N. C., and North Charlotte, N. C., 8.27 miles, and north from Greensboro, N. C., 1.80 miles.

The heavy work on the 13.67 miles of revised line and double track between Citico, Tenn., and Coltwah, Tenn. (the approach to Chattanooga, Tenn., from the east), has been prosecuted throughout the year and is nearing completion.

#### INDUSTRIAL PROGRESS.

There were 355 new industrial plants completed on the lines of this Company during the year ended June 30, 1910, classified as follows:

Brick works.....	28
Cottonseed-oil mills.....	21
Fertilizer works.....	3
Flour and feed mills.....	21
Furniture factories.....	7
Iron industries.....	21
Lumber mills.....	69
Stone quarries, coal and other mines.....	30
Textile mills.....	36
Woodworking plants.....	16
Miscellaneous plants.....	103
Total.....	355

The number of industrial plants under construction at the close of the year was 72, and the number of additions made to existing plants during the year aggregated 163.

#### THE SERVICE OF EMPLOYEES.

It is proper to record, with appreciation, the industry, loyalty and efficiency of the officers and employees of all ranks during the year. The future success of the Company under existing economic conditions depends largely upon its relations with the public, who are its customers, and these relations depend largely upon two things which the officers and employees can and will do give for the company in ever-increasing degree. These two things are solicitation and service. The company has during the year met the expectation of its employees in respect of increased wages, because of the increased cost of their individual living, but in so doing it has heavily increased its own cost of living, and it relies upon its officers and employees to justify such increase by securing for the Company, through proper relations with the public, effective solicitation and efficient service, such net revenue as will promote its welfare.

Respectfully submitted, by order of the Board,

W. W. FINLEY,  
President.

TABLE 1. COMPARATIVE BALANCE SHEET, JUNE 30, 1910, AND JUNE 30, 1909.

June 30, 1909.	Property Investment:	ASSETS.	June 30, 1910.
\$295,854,999 40	Road: Investment to July 1, 1909.....	\$295,854,999 40	
	Additions during the year (see page 20 of pamphlet report).....	3,923,593 70	
\$46,330,776 20	Equipment: Investment to July 1, 1909.....	\$46,330,776 20	\$299,778,593 10
	Additions during the year (see page 21 of pamphlet report).....	10,137,964 59	
1,782,583 41	Less: Reserve for Accrued Depreciation on all equipment in service.....	\$56,468,740 79	
44,548,192 79		12,060,132 83	44,418,607 96
\$340,463,192 19	Total Net Road and Equipment.....		\$344,197,201 06
\$23,808,697 31	Leasehold Estates:		
1,540,392 69	Road.....	\$31,558,607 31	
32,349,000 00	Equipment.....	1,540,392 69	33,099,000 00
	Total Leasehold Estates. (Per contract).....		5,797,848 03
\$372,752,192 19	Deposit with Trustee for the Purchase of Equipment, under Equipment Trust, Series N.....		\$383,094,049 09
\$12,306,634 97	Total Net Road, Equipment and Leasehold Estates.....		
20,296,872 21	Cost of Securities Pledged or Held for Special Purposes:		
23,313,703 20	Pledged under First Consolidated Mortgage (see Table 7, page 31 of pamphlet report).....	\$18,806,636 97	
10,774,697 05	Pledged under Development and General Mortgage (see Table 8, page 32 of pamphlet report).....	20,296,872 21	
	Pledged or deposited under Various Indentures.....	23,313,717 11	
	Unpledged, held for Special Purposes.....	6,872,508 78	69,258,935 07
67,691,907 43	Special Deposit with Financial Agent to redeem on November 1, 1909, Convertible Six Per Cent. Notes, due May 1, 1911.....		1,800,000 00
11,105,000 00	Southern Railway Development and General Mortgage Bonds.....		
\$451,549,099 62	Total Net Road, Equipment and Securities Held as Stated.....		\$454,152,984 16
\$3,595,255 50	Material and Supplies on Hand (see Table 22, page 48 of pamphlet report).....	\$4,215,870 11	
380,212 41	Rail and Fixtures Leased.....	391,513 51	4,607,383 62
4,375,467 51	Total Capital Assets.....		\$458,760,367 78
\$455,924,567 53	Miscellaneous Securities Owned—in Treasury Unpledged.....		4,061,052 94
4,015,569 88	Bills Receivable—deferred, but secured.....		574,929 10
505,479 68	Advances to Subsidiary Companies.....		1,078,584 19
925,622 31	Income Accrued—not due.....		446,841 28
473,572 89	Insurance Paid—not accrued.....		807 73
712 65	Insurance Fund. (Per contract).....		700,610 53
620,559 19	Sinking Funds—Uninvested Balance in hands of Trustee.....		
500 00	Net Discount on Securities Sold—to be charged off prior to maturity of the Securities.....		4,853,144 57
7,797,910 65	Sundry Accounts.....		1,153,696 52
1,534,988 75	Current Assets:		
	Cash in hands of Treasurer, Banks and Financial Agents.....	\$8,728,256 71	
\$11,124,694 97	Cash in Transit from Agencies.....	1,269,872 40	
1,117,044 74	Due from United States Postoffice Department.....	116,359 96	
125,307 26	Due from Agents and Conductors.....	450,220 46	
515,961 41	Due from Other Transportation Companies.....	2,973,420 75	
3,993,271 11	Due from Individuals and Companies.....	1,047,014 34	
905,652 53	Bills Receivable—current.....	602,085 14	
583,064 50	Miscellaneous Current Securities.....	7,013,800 00	22,201,029 76
824,300 00			\$493,831,064 43
18,350,236 58			
\$490,239,800 02			



June 30, 1909.		LIABILITIES.		June 30, 1910.	
\$120,000,000 00	Capital Stock:	Common.....		\$120,000,000 00	
60,000,000 00	Preferred.....			60,000,000 00	
	Total Capital Stock.....				\$180,000,000 00
\$229,000 00	Southern Railway, Mobile & Ohio Stock Trust Certificates.....				5,670,200 00
254,000 00	Funded Debt (see Table 5, page 29 of pamphlet report).....				220,157,300 00
1,617,000 00	Outstanding Securities on Leasehold Estates. (Per contra).....				33,059,000 00
35,550 00	Equipment Obligations:				
125,400 00	Equipment Trust, Series C.....				
2,700,000 00	Equipment Trust, Series D.....				
1,820,000 00	Equipment Trust, Series E.....				
7,200,000 00	Equipment Trust, Series F.....				
	Equipment Trust, Series G.....				
	Equipment Trust, Series H.....				
	Equipment Trust, Series K.....				
	Equipment Trust, Series L.....				
	Equipment Trust, Series M.....				
	Equipment Trust, Series N.....				
	Miscellaneous Equipment Contracts.....				
394,213 07	Unmatured Balance of Purchase Price, Northeastern Railroad of Georgia.....				18,298,791 84
14,475,163 07	Unmatured Balance on Hartwell (Ind.) Branch.....				107,000 00
107,000 00					6,117 71
6,113 71	Total Capital, Funded and Lien Liabilities.....				\$467,288,405 55
\$466,909,876 78	Reserves:				
	For Maintenance of Way and Structures.....				\$122,320 64
\$161,783 96	For Maintenance of Equipment.....				127,221 24
108,049 04	Miscellaneous.....				77,145 78
78,788 65	Interest and Rents Accrued—not due.....				726,089 56
	Taxes Accrued—not due.....				1,812,980 34
348,621 65	Unmatured Obligations for New Steel Rail.....				807,905 47
1,588,435 89	Insurance Fund. (Per contra).....				700,610 56
752,113 83	Sundry Accounts.....				316,588 59
990,940 21	Current Liabilities:				
620,059 19	Interest and Rents Due and Unpaid, including amount due July 1.....				\$2,876,246 25
265,472 15	Bills Payable, including current obligations for new steel rail.....				1,724,536 25
	Freight Claim Authorities Outstanding.....				91,028 97
	Unpaid Wages, including June Payrolls.....				1,873,480 31
\$2,751,421 05	Audited Vouchers.....				2,806,538 49
982,396 97	Due Other Transportation Companies.....				1,161,828 01
100,965 25	Due Individuals and Companies.....				487,986 00
1,825,752 61	Material and Supplies in Transit—not vouchered.....				676,125 63
2,636,019 34	Undetermined Liabilities awaiting adjustment.....				1,880,989 13
852,086 93	Appropriated Surplus—Additions to Property since June 30, 1907, through Income.....				13,638,758 98
288,914 55	Profit and Loss (see Table 4, page 28 of pamphlet report).....				253,305 46
319,284 15					8,685,959 91
1,743,886 71					\$493,831,964 43
11,500,679 96					
200,592 55					
6,962,007 81					
\$490,239,800 02					

NOTE.—For statement of guaranty of bonds of other corporations see Table 9, page 33 of pamphlet report.

TABLE 2. INCOME ACCOUNT FOR YEAR ENDED JUNE 30, 1910, COMPARED WITH YEAR ENDED JUNE 30, 1909.

1909.	Operating Revenues:	1910.
\$34,376,619 13	Freight.....	\$38,161,291 93
13,510,791 49	Passenger.....	14,639,169 76
267,721 31	Miscellaneous Passenger-Train Revenue.....	229,092 78
1,495,292 44	Mail.....	1,375,084 64
1,491,643 68	Express.....	1,620,028 34
758,344 00	Other Transportation Revenue.....	845,782 71
287,784 59	Other Revenue from Operation.....	373,370 18
\$52,188,106 64	Total Operating Revenues.....	\$57,294,508 34
\$6,016,690 64	Operating Expenses:	
8,193,753 44	Maintenance of Way and Structures.....	\$6,655,734 58
1,252,328 45	Maintenance of Equipment.....	9,876,728 58
18,348,507 08	Traffic Expenses.....	1,406,776 24
1,757,730 59	Transportation Expenses.....	18,924,428 56
	General Expenses.....	1,752,089 98
25,568,280 60	Total Operating Expenses.....	38,655,745 94
\$16,619,124 04	Net Operating Revenue.....	\$18,638,762 40
136,965 39	Outside Operations—Net Revenue.....	18,980 39
\$16,756,089 43	Net Revenue.....	\$18,657,742 79
1,916,701 65	Taxes Accrued (Federal Corporation Tax Excluded).....	1,579,722 33
\$14,839,387 78	Operating Income.....	\$16,688,020 41
\$21,000 00	Other Income:	
199,185 80	Rents Accrued from Lease of Road.....	\$15,499 98
114,651 73	Hire of Equipment—Balance.....	149,345 71
	Rents Accrued from Joint Tracks, Yards and Terminals.....	195,510 13
1,941,125 92	Miscellaneous Rents.....	125,016 29
622,948 25	Miscellaneous Income.....	80,265 14
	Income from Investments.....	1,599,138 71
	Miscellaneous Interest and Commissions.....	565,229 76
2,868,311 70	Total Other Income.....	3,179,135 72
\$17,737,699 48	Total Gross Income.....	\$19,877,156 15
	Deductions from Total Gross Income:	
\$1,351,504 00	Southern Railway Company in Mississippi, Income from operation, Alabama State Line to Columbus, Miss.....	\$31,958 56
769,094 52	Rents Accrued for Lease of Other Roads (see Table 3 of pamphlet report).....	1,381,514 00
19,493 29	Rents Accrued for Joint Tracks, Yards and Terminals.....	8,045,651 55
45,714 79	Hire of Equipment—Balance.....	60,303 80
81,463 71	Miscellaneous Rents.....	115,062 04
535,214 44	Separately Operated Properties.....	256,806 19
31,290 36	Discount on Securities Sold—Proportion charged to Income.....	47,382 62
	Federal Corporation Tax.....	92,688 26
2,832,775 21	Miscellaneous Deductions.....	2,806,451 43
\$14,904,924 27	Total.....	\$17,950,704 72
\$10,376,016 21	Total Available Income.....	\$11,313,986 11
711,714 64	Interest on Funded Debt (see Table 3 of pamphlet report).....	\$10,481,500 80
226,808 00	Interest on Equipment Obligations (see Table 3 of pamphlet report).....	6,537 31
	Dividends Accrued on Southern Railway, Mobile & Ohio Stock Trust Certificates.....	226,808 00
11,314,538 85		
\$3,589,385 42	Balance of Income over Charges.....	\$5,157,918 61
78,285 18	Additions and Betterments.....	52,372 91
\$3,511,100 24	Balance Carried to Credit of Profit and Loss for the Year.....	\$5,704,645 70

TABLE 4.—PROFIT AND LOSS ACCOUNT FOR YEAR ENDED JUNE 30, 1910.

Balance at Credit of this Account June 30, 1909.....	\$6,962,007 81
Add:	
Credit Balance of Income for the Year.....	5,704,645 70
	\$12,666,653 51
Deduct:	
Discount on Securities charged to Profit and Loss during the year.....	\$2,831,459 89
Tennessee Central Railroad Accounts written off.....	404,348 92
Net Miscellaneous Debits.....	744,584 79
	3,980,393 60
Credit Balance June 30, 1910.....	\$8,685,959 91

TABLE 12.—TRAFFIC STATISTICS FOR YEARS ENDED JUNE 30, 1910 AND 1909.

	1910.	1909.	Per Cent. Inc. or Dec.
Average miles of road operated.....	7,650.17	7,609.38	Increase 0.28
Passenger Traffic:			
Number of passengers carried.....	15,694,486	14,623,136	Increase 7.33
Number of passengers carried one mile.....	671,732,143	615,252,906	Increase 9.18
Average distance hauled per passenger (miles).....	42.80	42.07	Increase 1.74
Total revenue from passengers.....	\$14,639,169 76	\$13,317,925 23	Increase 9.92
Average receipts per passenger per mile (cents).....	2.179	2.105	Increase 0.65
Total passenger-train revenue.....	\$17,913,963 52	\$16,542,236 79	Increase 8.29
Passenger-train revenue per mile of road.....	\$2,540.93	\$2,352.97	Increase 7.99
Passenger-train revenue per train mile.....	\$1,148.43	\$1,153.89	Decrease 0.73
Average number of passengers in each train.....	43.06	43.03	Increase 0.07
*Average number of passengers in each car.....	13.42	13.73	Decrease 2.26

Freight Traffic:

Revenue Freight:			
Number of tons carried.....	25,294,297	21,970,906	Increase 14.72
Number of tons carried one mile.....	3,985,543,001	3,560,900,061	Increase 10.99
Average distance hauled per ton (miles).....	158.13	167.45	Decrease 5.25
Total freight-train revenue.....	\$28,161,291 93	\$24,081,652 51	Increase 17.37
Average receipts per ton per mile.....	\$1.12	\$1.09	Increase 0.84
Freight-train revenue per mile of road.....	\$3,612.83	\$3,487.48	Increase 3.63
Freight-train revenue per train mile.....	\$2,273.98	\$2,090.97	Increase 8.50
Average number of tons of freight in each train.....	237.46	217.19	Increase 8.93
Average number of tons of freight in each loaded car.....	14.53	14.19	Increase 2.39
All Freight (Including Company's Material Hauled Free):			
Number of tons carried.....	20,181,000	18,175,298	Increase 11.03
Number of tons carried one mile.....	3,269,652,728	2,860,969,266	Increase 14.29
Average distance hauled per ton (miles).....	164.40	157.45	Decrease 4.41
Total freight-train revenue.....	\$24,081,652 51	\$20,970,920 41	Increase 14.83
Average receipts per ton per mile.....	\$1.12	\$1.09	Increase 0.84
Freight-train revenue per mile of road.....	\$3,612.83	\$3,487.48	Increase 3.63
Freight-train revenue per train mile.....	\$2,273.98	\$2,090.97	Increase 8.50
Average number of tons of freight in each train.....	237.46	217.19	Increase 8.93
Average number of tons of freight in each loaded car.....	14.53	14.19	Increase 2.39
Revenues and Operating Expenses:			
Passenger and freight-train revenue.....	\$56,975,355 45	\$50,621,289 31	Increase 10.77
Passenger and freight-train revenue per mile of road.....	\$7,363.74	\$6,720.45	Increase 9.56
Gross operating revenue.....	\$57,294,508 34	\$51,661,529 44	Increase 10.79
Gross operating revenue per mile of road.....	\$7,481.25	\$6,748.33	Increase 10.39
Gross operating revenue per revenue train mile.....	\$1,829.91	\$1,734.11	Increase 5.57
Operating expenses (taxes excluded).....	\$28,632,745 94	\$25,152,791 60	Increase 9.91
Operating expenses per mile of road.....	\$3,780.11	\$3,300.12	Increase 9.69
Operating expenses per revenue train mile.....	\$1,229.67	\$1,179.49	Increase 4.32
Net operating revenue.....	\$18,658,762 40	\$16,508,847 84	Increase 12.92
Net operating revenue per mile of road.....	\$2,406.57	\$2,148.21	Increase 12.71
Net operating revenue per revenue train mile.....	\$0.5594	\$0.5592	Increase 7.59

\*Includes sleeping, parlor and observation cars.

# LOUISVILLE & NASHVILLE RAILROAD COMPANY.

FIFTY-NINTH ANNUAL REPORT—FOR THE FISCAL YEAR ENDED JUNE 30, 1910.

Louisville, Ky., October 5, 1910.

To the Stockholders of the Louisville & Nashville Railroad Co.:

The Board of Directors of your Company respectfully submits the following report for the fiscal year ended June 30, 1910:

## MILEAGE.

	Miles.
<b>I.—Lines Owned and Operated:</b>	
(1) Owned.....	3,435.93
(2) Operated but not owned:	
(a) Operated as owner of entire Capital Stock.....	535.03
(b) Operated under lease.....	118.97
(c) Operated for account of owners.....	221.88
(d) Operated under trackage arrangements.....	219.61
	1,995.49
Total operated.....	4,595.55
Average mileage operated during the year, 454.30.	
<b>II.—Lines Operated Under Their Separate Organization, in which This Company Owns a Majority of the Capital Stock or is Interested as Joint Owner or Lessee:</b>	
Nashville, Chattanooga & St. Louis Railway (a majority of the Capital Stock owned).....	975.85
Central Transfer Railway & Storage Co., Louisville (one-half of the Capital Stock owned).....	.67
Georgia Railroad and Dependents (interested as joint lessee).....	571.00
Chicago, Indianapolis & Louisville Railway (a majority of the Capital Stock owned jointly with the Southern Railway Co.).....	615.75
Louisville, Henderson & St. Louis Railway, less mileage of Louisville & Nashville Railroad operated under trackage arrangements (a majority of the Capital Stock owned).....	181.70
Woodstock & Blocton Railway (one-half of the Capital Stock owned).....	7.73
	2,352.70
Less—Mileage used by this Company under trackage arrangements:	
Woodstock & Blocton Railway.....	7.73
Nashville, Chattanooga & St. Louis Railway.....	50.41
	58.14
	2,294.56
<b>III.—Lines Owned by This Company, but Operated by Other Companies:</b>	
Paducah & Memphis Division (leased to Nashville, Chattanooga & St. Louis Railway at 5 per cent. on cost of road).....	254.20
Less—Mileage used by this Company under trackage arrangements.....	5.46
	248.74
Clarksville & Princeton Branch—Gracey, Ky., to Princeton, Ky. (leased to Ohio Valley Railway Co. at \$12,035.70 per annum).....	20.56
	269.30
Total mileage.....	7,154.41
Total mileage June 30, 1909.....	7,002.37
Increase.....	152.04
Accounted for as follows:	
Additions:	
Louisville & Atlantic Railroad.....	104.10
Madisonville, Hartford & Eastern Railroad.....	55.49
	159.59
Deductions:	
Sundry net deductions.....	7.55
	152.04

## BONDED DEBT.

Bonded Debt June 30, 1909, total issue.....	\$155,234,500
Bonds Drawn for Sinking Funds:	
Redeemed:	
Evansville, Henderson & Nashville Division Gold.....	\$30,000
General Mortgage Gold.....	420,000
Pensacola & Atlantic Railroad First Mortgage Gold.....	78,000
Pensacola Division First Mortgage Gold.....	20,000
Louisville & Nashville Sinking Fund Gold.....	20,000
	\$668,000
Unredeemed (Not Presented for Payment):	
General Mortgage.....	\$54,000
Evansville, Henderson & Nashville Division Gold.....	6,000
Henderson Bridge Co. First Mortgage Gold.....	1,000
	61,000
	\$668,000
Bonds Matured:	
Redeemed:	
Louisville & Nashville Sinking Fund Gold.....	\$1,797,000
Unredeemed (Not Presented for Payment):	
Louisville & Nashville Sinking Fund Gold.....	123,000
	\$1,920,000
	\$2,588,000
Bonds Issued:	
Unified Fifty-year 4 per cent. Gold.....	\$573,000
Atlanta, Knoxville & Cincinnati Division 4 per cent. Gold.....	2,125,000
	\$2,698,000
Net increase over last year.....	110,000
Bonded Debt June 30, 1910, total issue (see Balance Sheet, Table III, pamphlet report).....	\$155,344,500
Less:	
Bonds Owned (see Table No. V, pamphlet report):	
In Treasury.....	\$19,844,000
Deposited in Trusts as Collateral.....	7,079,000
Held in Sinking Funds.....	794,000
	27,717,000
Total Outstanding Bonded Debt in hands of public June 30, 1910.....	\$127,627,500
Total Outstanding Bonded Debt in hands of public June 30, 1909.....	129,778,500
Decrease in Bonds outstanding in hands of public.....	\$2,151,000
Accounted for as follows:	
Bonds drawn for Sinking Fund, including Redeemed and Unredeemed Bonds.....	\$668,000
Bonds matured, including Redeemed and Unredeemed Bonds.....	1,920,000
Bonds purchased and taken into Treasury.....	\$66,000
Bonds purchased for Sinking Funds.....	49,000
	115,000
	\$2,703,000
Less:	
Bonds withdrawn from Treasury and canceled for Sinking Funds.....	\$100,000
Bonds Matured:	
In Treasury.....	\$136,000
In Sinking Fund.....	166,000
	302,000
Bonds Sold:	
Atlanta, Knoxville & Cincinnati Division 4 per cent. Gold.....	150,000
	552,000
Decrease as shown above.....	\$2,151,000

## GENERAL RESULTS.

The General Results, as given in detail in Table No. I, pamphlet report, are here summarized:

Operating Revenues.....	\$52,433,381 94
Less Operating Expenses (66.72 per cent.).....	34,985,578 78
Net Operating Revenues (33.28 per cent.).....	\$17,447,803 16
Taxes.....	1,602,632 32
	\$15,845,170 84
Other Income:	
From Rents.....	\$581,444 57
From Investments.....	788,336 19
From Interest.....	363,581 85
From Outside Operations.....	121,232 09
	1,854,595 40
Total Income.....	\$17,699,766 24
Deductions from Income:	
Interest on Bonded Debt.....	\$6,088,919 00
Rents.....	407,392 07
Sinking Funds.....	266,240 17
	6,762,551 24
	\$10,937,215 00
South & North Alabama Railroad Co. surplus (included in above).....	523,358 93
Net Income carried to Profit and Loss Account.....	\$10,413,255 07
The balance to credit of Profit and Loss Account amounts to \$27,675,361. For details see Table No. II.	

## GROWTH OF TRAFFIC.

The growth of traffic for the past ten years is shown by the following table:

Years.	Average miles operated.	Operating revenues.	Operating expenses.	Net operating revenues.
1900-1901.....	3,169.27	\$28,022,206 90	\$18,233,033 50	\$9,789,173 40
1901-1902.....	3,326.75	30,712,257 37	20,902,437 84	9,809,819 53
1902-1903.....	3,438.93	35,449,377 84	23,970,812 44	11,478,565 40
1903-1904.....	3,618.19	36,943,792 73	25,141,548 27	11,802,244 46
1904-1905.....	3,826.31	38,517,070 72	26,490,020 97	12,027,049 75
1905-1906.....	4,130.91	43,008,966 23	30,933,463 71	12,075,502 52
1906-1907.....	4,306.33	48,263,945 29	35,781,302 54	12,482,642 66
1907-1908.....	4,347.89	44,639,281 16	*33,594,291 05	11,045,090 11
1908-1909.....	4,393.11	45,425,891 45	*29,627,499 48	15,798,391 97
1909-1910.....	4,554.20	52,433,381 94	*34,985,578 78	17,447,803 16

\*Does not include Additions and Betterments heretofore included in Operating Expenses.

## RAILS.

The rails in main track operated, except trackage rights, are shown below:

Steel Rails:	Miles.
Under 58½ pounds per yard.....	152.65
58½ pounds per yard.....	601.37
60 to 65 pounds per yard.....	344.67
68 pounds per yard.....	79.22
70 pounds per yard.....	1,431.31
80 pounds per yard.....	1,748.98
85 pounds per yard.....	11.69
141 pounds per yard.....	.74
	4,370.33
Iron Rails.....	.61
Total.....	4,370.94
To which add:	
Operated under trackage arrangements.....	219.61
Total mileage owned and operated (see above).....	4,590.55

The rails in main track owned, operated by other companies, are shown below:

Steel Rails:	Miles.
56 pounds per yard.....	127.33
58 pounds per yard.....	2.51
60 pounds per yard.....	112.46
68 pounds per yard.....	8.87
80 pounds per yard.....	2.98
85 pounds per yard.....	20.56
	274.76
Less portion of Paducah & Memphis Division used by L. & N. Railroad under trackage arrangements.....	5.43
Total mileage operated by other companies (see above).....	269.30

## ADDITIONS AND BETTERMENTS—EQUIPMENT.

The following expenditures for additions and betterments, equipment, were charged to Property Investment, Equipment, during the year:

Charges:	
Locomotives:	
Thirty-four (34) bought or built.....	\$428,709 71
Expenditures on new Locomotives not yet completed.....	10,806 44
Equipping with self-cleaning ash pans.....	27,241 36
	\$466,757 51
Passenger Train Cars:	
Thirteen (13) bought or built.....	\$76,424 71
Equipping with steam-heating apparatus.....	7,431 96
	\$83,856 67
Freight Train Cars:	
Two thousand one hundred and twenty (2120) bought or built.....	\$1,271,809 02
Expenditures on new cars not yet completed.....	2,075 93
Equipping tank cars with improved unloading device.....	926 54
Equipping cars with air brakes.....	729 85
	1,275,541 34
Work Equipment:	
Eighty-one (81) Freight Train Cars changed to Work Equipment.....	\$24,350 72
Equipping cars with air brakes.....	853 83
	25,204 55
Floating Equipment:	
One (1) large built.....	1,420 79
Total charges.....	\$1,852,780 56
Credits:	
Locomotives:	
Twenty (20) destroyed or sold.....	\$205,021 68
Passenger Train Cars:	
Eight (8) destroyed or sold.....	20,611 34
Freight Train Cars:	
Nine hundred and fifty-four (954) destroyed or sold.....	508,398 46
Work Equipment:	
One hundred and fifteen (115) destroyed or sold.....	36,367 09
	\$770,398 57
Freight Train Cars:	
Eighty-one (81) changed to Work Equipment.....	44,100 61
Total credits.....	\$1,384,490 18
Net charges to Additions and Betterments, Equipment, for the year.....	\$1,388,288 38
Acquired with new lines taken into system this year.....	192,169 00
Total charge for the year (Table VI, pamphlet report).....	\$1,230,450 38



## ADDITIONS AND BETTERMENTS—ROAD.

During the year there were charged to Property Investment, Road, expenditures for additions and betterments as follows:

Right of way and station grounds.....	\$58,754 93
Real estate.....	40 97
Widening cuts and fills.....	38,477 93
Protection of banks.....	1,881 21
Grade revisions and changes of line.....	506,039 25
Tunnel improvement.....	Cr. 834 02
Bridges, trestles and culverts.....	198,634 44
Increased weight of rail.....	79,481 58
Improved frogs and switches.....	5,351 48
Track fastenings and other material.....	9,268 70
Ballast.....	9,180 88
Additional main tracks.....	365,037 08
Sidings and spur tracks.....	127,926 34
Terminal yards.....	55,265 20
Fencing right of way.....	15,967 85
Improvement of over and under grade crossings.....	251 41
Track elevation, elimination of grade crossings, etc.....	41,474 84
Interlocking apparatus.....	14,701 31
Block and other signal apparatus.....	30,729 96
Telegraph and telephone lines.....	53,369 96
Station buildings and fixtures.....	140,262 01
Shops, engine-houses and turntables.....	Cr. 2,076 99
Shop machinery and tools.....	33,421 07
Water and fuel stations.....	30,638 17
Dock and wharf property.....	10,339 75
Miscellaneous structures.....	47,085 77

Total for year ending June 30, 1910 (see Table VI, pamphlet report).....\$1,880,462 33

Total for year ending June 30, 1909.....866,546 87

Increase.....\$1,023,915 46

## SOUTH &amp; NORTH ALABAMA RAILROAD COMPANY.

Charges:	
Locomotives:	
Equipping with self-cleaning ash pans.....	\$1,211 00
Credits:	
Freight Train Cars:	
Three (3) destroyed.....	1,979 16

Net Credits for the year.....\$768 16

There was no equipment acquired by the South & North Alabama Railroad Co. during the year.

## EQUIPMENT OWNED.

	Locomotives.	Passenger cars.	Freight cars.	Work equipment.
Louisville & Nashville Railroad:				
On hand July 1, 1909.....	849	573	41,473	1,421
Bought and built.....	34	13	2,129	—
Acquired by purchase of other roads.....	15	12	217	—
Changed.....	—	—	—	81
Destroyed or sold.....	20	8	154	115
On hand.....	878	580	42,775	1,429
South & North Alabama Railroad:				
On hand July 1, 1909.....	50	—	247	—
Destroyed.....	—	—	3	—
On hand.....	50	—	244	—

## RESERVE FOR ACCRUED DEPRECIATION—EQUIPMENT.

Credits:	
Depreciation:	
Locomotives.....	\$385,966 92
Passenger Train Cars.....	67,754 31
Freight Train Cars.....	1,295,529 61
Work Equipment.....	34,403 00
	\$1,783,653 83

*Renewals:	
For twenty (20) Locomotives destroyed and sold.....	\$15,929 87
For eight (8) Passenger Train Cars destroyed.....	10,988 67
For nine hundred and fifty-four (554) Freight Train Cars destroyed.....	208,267 53
For one hundred and sixteen (116) Work Cars destroyed.....	13,131 33
	247,417 40

Total charges to Operating Expenses for Depreciation and Renewals.....	\$2,031,101 23
Depreciation on Dining and Special Cars—Dining Cars, charged to Outside Operations.....	3,845 16

This amount has been charged to Operating Expenses and to Outside Operations.....	\$2,034,946 39
Balance June 30, 1909.....	\$720,224 59

Amount of entries made during this fiscal year to adjust Reserve for Accrued Depreciation to June 30, 1909:	
Locomotives.....	\$5,577,813 07
Passenger Train Cars.....	851,186 43
Freight Train Cars.....	7,938,462 66
Work Equipment.....	288,412 73
	12,655,874 89

Total Credits to Reserve for Accrued Depreciation.....	\$15,411,945 87
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Charges:	
For original cost of equipment destroyed and sold, credited to Additions and Betterments:	
Locomotives.....	\$25,021 68
Passenger Train Cars.....	29,311 34
Freight Train Cars.....	508,398 46
Work Equipment.....	36,267 09

Accrued Depreciation on Freight Train Cars changed to Work Equipment.....	\$770,398 57
	35,391 70
	805,790 27

Balance to credit of Reserve for Accrued Depreciation—Equipment June 30, 1910.....	\$14,605,255 60
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## MAINTENANCE OF EQUIPMENT.

The average cost per mile for repairs to equipment for the past ten years has been as follows:

	1900-1	1901-2	1902-3	1903-4	1904-5	1905-6	1906-7	1907-8	1908-9	1909-10
Locomotive repairs, per mile.....	6.043	6.226	6.590	6.962	6.747	9.102	7.771	9.060	8.092	7.884
Passenger Car repairs, per mile.....	1.401	1.429	1.410	1.267	1.290	1.646	1.546	1.542	1.191	1.292
Freight Car repairs, per mile.....	.712	.709	.800	.889	.829	.865	1.049	.918	.745	.739

All equipment of the Company in revenue service is provided with both air brakes and automatic couplers, except freight equipment, which is equipped complete with automatic couplers only. The number of freight cars equipped with air brakes is 42,450, or 98.68 per cent.

The following table shows the equipment on hand at the close of each of the past ten fiscal years:

	1900-1	1901-2	1902-3	1903-4	1904-5	1905-6	1906-7	1907-8	1908-9	1909-10
Locomotives.....	563	589	605	676	705	745	865	896	896	928
Passenger Cars.....	456	462	471	501	515	535	559	572	572	590
Freight Cars.....	23,667	24,880	25,118	26,905	28,241	26,632	29,528	40,589	41,720	43,019
Work Equipment.....	534	586	705	779	1,149	1,289	1,452	1,503	1,421	1,429

## PAYMENTS TO BE MADE ON ACCOUNT OF SINKING FUNDS, 1910-1911.

Newport & Cincinnati Bridge Co., July 1, 1910.....	\$14,900
Henderson Bridge Co., August 1, 1910.....	8,400
Pensacola Division, September 1, 1910.....	21,900
Evansville, Henderson & Nashville Division, December 1, 1910.....	121,000
Pensacola & Atlantic Railroad, February 1, 1911.....	90,200
General Mortgage, June 1, 1911.....	550,000
Total.....	\$804,600

## GUARANTIES.

The Company has guaranteed, by endorsement or by agreement, the following obligations of other companies:

	Issued.	Annual charge.
South & North Alabama Railroad Co. Consolidated Mortgage 5 per cent. Gold Bonds:		
Endorsement covers principal and interest.....	\$10,000,000 00	\$50,000 00
Louisville & Nashville Terminal Co. First Mortgage 4 per cent. Gold Bonds:		
Endorsement, made jointly and severally with Nashville, Chattanooga & St. Louis Railway, covers principal and interest of bonds issued.....	2,535,000 00	101,400 00
Louisville & Nashville-Southern, Monon Collateral, Joint 4 per cent. Gold Bonds:		
This Company and the Southern Railway Co. are each liable for one-half of the principal and interest of bonds issued, \$11,827,000. One year's interest, \$473,080; this Company's liability, one-half. Should either Company default in its obligations to the other, in respect of the bonds of this issue, the pledged shares of stock belonging to such Company so in default shall become and be the property of the Company not in default, which thenceforth shall be liable in severally upon all covenants contained in the bonds.....	5,912,500 00	236,540 00
Nashville & Decatur Railroad, Rent Dividend:		
Under lease of this property the payment of 7½% annual dividend to stockholders is guaranteed as rent. Amount of Capital Stock, \$3,553,750.....		264,531 25
Terminal Railroad Association of St. Louis:		
One-fourteenth of interest on \$19,594,000 General Mortgage 4½% Gold Bonds now outstanding—one year's interest, \$719,760; L. & N. R. R. Co.'s proportion, one-fourteenth.....		57,125 71
Georgia Railroad Lease:		
The Company is liable jointly with the Atlantic Coast Line Railroad Co. for the yearly rent, under the lease of the Georgia Railroad, amounting to \$900,000. This Company's liability, per annum.....		200,000 00
Memphis Union Station Co.:		
5% Collateral Gold Notes due November 1, 1911.....	1,500,000 00	75,000 00
Secured by deposit of \$2,000,000 First Mortgage 4½% 50-Year Gold Bonds of the Memphis Union Station Co.		
Endorsement, made jointly and severally with Nashville, Chattanooga & St. Louis Railway, Southern Railway Co., St. Louis, Iron Mountain & Southern Railway Co. and St. Louis Southwestern Railway Co., covers principal and interest of the notes and bonds issued.		

The notes issued for the creation of the Union Passenger Station facilities at Memphis, Tenn., aggregating \$1,200,000, made jointly with various roads entering Memphis, mentioned in last year's report, have been paid by the interested lines. This Company's proportion amounted to \$122,400.

## REDUCTION OF GRADES, NASHVILLE TO HENDERSON.

The revision of line from Madison, Tenn., on the Main Stem, to Goodletts, Tenn., on the Henderson Division, which was mentioned in last year's report, and which provides a 0.6 per cent. compensated grade, as against 1½ per cent. grade on the existing line, is nearly complete. It is expected that the line will be put in operation about the first of September, 1910. The distance from St. Louis via the revised line will be shortened 0.47 of a mile.

Construction has been undertaken for the completion of the reduction of grades on the Henderson Division by constructing a new roadway between Guthrie, Ky., and Henderson, Ky., partly on the present right of way and partly on routes diverging from the present right of way. The total distance from Guthrie to Rollards is 8.51 miles, over 79.2 per cent. of which the work is being done. The maximum grade will be 0.6 per cent. compensated, and the maximum curve 4 degrees.

## LOUISVILLE &amp; ATLANTIC RAILROAD.

As mentioned in last year's report, the entire capital stock and all of the bonds of the Louisville & Atlantic Railroad Company were acquired by this Company. The legal title to the property rights, privileges, immunities, powers and franchises have been conveyed to the Louisville & Nashville Railroad Company by deed dated November 1, 1909, and the road is now operated as a part of the system.

## MADISONVILLE, HARTFORD &amp; EASTERN RAILROAD.

This Company owns all of the capital stock of the Madisonville, Hartford & Eastern Railroad Company, which has constructed a railroad 55.4 miles in length, extending from a connection with the Morgantown Branch, near Madisonville, Ky., through Hopkins, Muhlenberg and Ohio counties, Kentucky, in a northeasterly direction to a connection with the Louisville, Henderson & St. Louis Railway, near Fordsville, Ky., providing a short line from coal fields and rich agricultural districts of Western Kentucky to Louisville. This Company has advanced on account of construction of this road \$1,627,681.71, for which bonds of the Madisonville, Hartford & Eastern Railroad Company will be received. The tracklaying was completed and the line placed in operation on January 4, 1910.

## FRANKFORT &amp; CINCINNATI RAILWAY.

This Company owns all the capital stock of the Frankfort & Cincinnati Railway Company, and, by deed dated October 25, 1909, the legal title to the properties, rights, privileges, immunities and franchises (except the franchise to exist as a corporation) of that Company were conveyed to the Louisville & Nashville Railroad Company, and the operations since November 1, 1909, and mileage are included in this report. Shortly after deed was executed suit was brought in the Franklin County (Ky.) Circuit Court to have the acquisition of the Frankfort & Cincinnati Railway by the Louisville & Nashville Railroad Company declared unlawful as contrary to the Constitution of Kentucky. Under an order issued by the Court the accounts of the Frankfort & Cincinnati Railway Company are being kept in such manner that a proper accounting may be had if required. The suit is still pending.

## REDEMPTION OF LOUISVILLE &amp; NASHVILLE RAILROAD COMPANY THREE PER CENT. SINKING FUND BONDS.

On March 1, 1907, \$6,500,000 of these notes were issued, which matured March 1, 1910. Prior to that date notes were purchased and canceled amounting to \$2,793,903, leaving outstanding at the date of maturity \$3,706,097, which have all been redeemed with the exception of \$21,000.

## REDEMPTION OF LOUISVILLE &amp; NASHVILLE RAILROAD COMPANY SIX PER CENT. SINKING FUND BONDS.

These bonds were issued on April 1, 1880, and matured on April 1, 1910, all of which have been redeemed with the exception of \$123,000, for which cash has been deposited with the Union Trust Company of New York, Trustee.

The collateral security, owned by this Company and held under this Trust Deed, consisting of \$2,000,000 Second Mortgage Bonds of the South & North Alabama Railroad Company, which matured on the same date as the above Six Per Cent. Sinking Fund Bonds, has been surrendered to the South & North Alabama Railroad Company, this Company receiving in payment therefor South & North Alabama Railroad Company Five Per Cent. Consolidated Mortgage Bonds.

## NEW FORM OF GENERAL BALANCE SHEET.

Effective June 15, 1910, the Interstate Commerce Commission prescribed a form of general balance sheet statement, which is used in this report. In many respects the requirements of the Commission as to the classification of the accounts are at variance with the accounting methods heretofore used by this Company. This will, therefore, render impracticable the comparison of items on balance sheet with those of previous years.

Attention is called to the report of the Comptroller for the details of the year's business.

The Board acknowledges the fidelity and efficiency with which the officers and employees of the Company have served its interests.

For the Board of Directors,  
H. WALTERS, Chairman,  
M. H. SMITH, President.

## TABLE No. II.—PROFIT AND LOSS ACCOUNT.

	Credits.	Debits.
Balance to credit of this account June 30, 1909.....	\$23,431,527 08	
Sinking Fund Payments for which no bonds are to be received, charged to Income Account.....		124,296 06
Interest accrued on Company's Bonds in Sinking Funds.....		73,390 17
Sale of property at various points.....		18,659 65
Georgia Railroad lease:		
Income from securities.....	\$66,207 00	
Income from operation.....	137,128 24	
		203,335 24
Miscellaneous credits.....		65,827 46
Net surplus from operation for year ended June 30, 1910, transferred from Income Account.....		10,413,256 07
		\$34,340,491 77
For Cash Dividend 3½%, payable February 19, 1910.....	\$2,100,000 00	
For Cash Dividend 2½%, payable August 10, 1910.....	2,100,000 00	
Adjustment of Reserve for Accrued Depreciation, Equipment.....	2,318,502 54	
Amount due Georgia Railroad on account of Atlanta Joint Terminals.....	167,251 29	
Miscellaneous debits.....		29,376 84
Appropriated surplus—amount invested in Sinking and Redemption Funds.....	\$212,566 97	
Balance to credit of Profit and Loss Account June 30, 1910.....	27,462,794 03	
		\$34,340,491 77

## FINANCIAL NEWS

## Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., October 19.

The Baltimore stock market has been without special interest during the past week. In the trading United Railways common sold from 14 1/4 to 15; do. trust certificates, 15 1/4; do. income bonds, 62 1/4 to 63; do. funding 5s, 84 to 84 1/4; do. do. scrip, 84 1/2 to 85; United 4s, 85 1/2 to 85; Consolidated Gas, Electric Light & Power common, 62 to 60 1/4; do. 4 1/2s, 83 1/2 to 84 1/4; do. notes, 98 1/2 to 98 3/4; Consolidated Gas 5s, 108; do. 4 1/2s, 93; Seaboard Company common, 20 to 20 1/4; do. second preferred, 40 to 42; Seaboard 4s, 85 1/2 to 86 1/4; do. stamped, 85 1/4 to 87; do. three-year 5s, 90 1/4; do. 10-year 5s, 90 1/4; Consolidated Cotton Duck common, 4 1/4 to 4 1/2; do. preferred, 15 to 18 1/2; Mt. Vernon-Woodberry Cotton Duck 5s, 72 1/2 to 73 1/4; G. B. S. Brewing 1sts, 42 to 42 1/4.

Bank stocks sold as follows: Bank of Baltimore, 125 to 131; Citizens', 39 3/4; Union, 125; Mechanics', 28; Bank of Commerce, 30.

Mercantile Trust sold from 141 to 141 1/4; American Bonding, 78 1/2 to 79; United States Fidelity, 140; Maryland Casualty, 97 to 95 1/4; Maryland Trust preferred, 99.

Other securities were traded in thus: Georgia, Carolina & Northern 5s, 104 1/4; Northern Central Railway stock, 126 to 127 1/4, with last sale at 126 1/4; Wilmington & Weldon 5s, 110; Atlantic Coast Line convertible debenture 4s, 97 1/4 to 98 3/4; Charleston & Western Carolina 5s, 106 to 105 1/4; Houston Oil common, 6 to 6 1/4; do. preferred, 36 1/2; Georgia & Alabama Consolidated 5s, 104 1/4 to 104 1/4; Maryland Electric 5s, 98 to 98 1/4; Norfolk Railway & Light 5s, 98 to 97 1/4; United States Steel, 72 1/4; Canton Company (Baltimore), 120; Fairmont & Clarksburg Traction 5s, 90 1/4 to 97 1/4; Virginia Century, 84 1/4; Baltimore City Passenger 5s, 100 1/4; Northern Central 5s A, 110 1/4; Virginia Midland 2ds, 100 1/4; Western North Carolina 6s, 105 3/4; Norfolk & Portsmouth Traction 5s, 82 1/4; City & Suburban (Baltimore) 5s, 105 3/4; Coal & Iron Railway 5s, 100 1/4; George's Creek Coal & Iron, 7; Knoxville Traction 5s, 103; Norfolk Railway & Light common, 22; Richmond & Danville gold 6s, 105 3/4; Baltimore, Sparrows Point & Chesapeake 4 1/2s, 92 1/4; Maryland & Pennsylvania common, 22 1/2; Western Maryland 4s, 86 1/2 to 86 3/4; Atlantic Coast Line common, 119 1/4; Atlantic Coast Line of Connecticut, 236 to 235; Baltimore City 3 1/2s, 1980, 87; do. 4s, 1957, 99 1/2; Consolidation Coal, 108; Baltimore Traction (North Baltimore Division) 5s, 110 1/4; Atlantic Coast Line 4s, certificates, 84 1/2; Baltimore & Potomac main line 6s, 100 5/8; Georgia Southern & Florida 5s, 107; Charleston Consolidated Electric 5s, 93; Maryland 3s, 1909-1914, 96 1/4; Anacostia & Potomac 5s, 100 3/4; Maryland Life Insurance Co., 30; Jamison Coal & Coke (George's Creek) 5s, 88 1/4; German Fire Insurance, 18; Maryland & Pennsylvania 4s, 87.

## SECURITIES AT BALTIMORE.

## Last Quotations for the Week Ended October 19, 1910.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	118	119
Atlantic Coast of Conn.....	100	234	210
Fairmont & Clarks. Trac. Pfd.....	100	76	76
Georgia Sou. & Fla. 1st Pfd.....	100	91 1/2	91 1/2
Georgia Sou. & Fla. 2d Pfd.....	100	65	65
Maryland & Pennsylvania.....	100	22 1/2	22 1/2
Norfolk Railway & Light.....	25	22 1/2	22 1/2
Seaboard Company Common.....	100	20 1/4	21
Seaboard Company 1st Pfd.....	100	41	41
Seaboard Company 2d Pfd.....	100	41	41
United Rys. & Elec. Co.....	50	14 1/2	15

Bank Stocks.	Par.	Bid.	Asked.
Bank of Baltimore.....	100	128	132
Bank of Commerce.....	10	39	40
Citizens'.....	10	39 1/4	40
City.....	100	110	110
Exchange.....	100	158	160 1/2
First National.....	100	175	175
Howard.....	10	13 1/4	13 1/4
Maryland.....	20	23	23
Marine.....	30	40 1/2	40 1/2
Third National.....	100	130	150
Union.....	100	122 1/2	127
Western.....	20	36	36

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding.....	25	78 1/2	79
Baltimore Trust.....	100	162	164 1/2
Confidential Trust.....	100	195	200
Fidelity & Deposit.....	50	147	150
Maryland Casualty.....	25	96	96
Mercantile Trust & Deposit.....	50	141 1/2	142
Union Trust.....	50	71 1/2	71 1/2
U. S. Fidelity & Guaranty.....	100	141	150

Miscellaneous Stocks.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron.....	100	40	40
Ala. Con. Coal & Iron Pfd.....	100	42	57

Con. Gas, Elec. Lt. & P. Com. 100	60	62
Con. Gas, Elec. Lt. & P. Pfd. 100	99	92
G. B. S. Brewing Co. 100	100	2
Georges Creek Coal.....	100	9 1/2

Railroad Bonds.	Par.	Bid.	Asked.
Atlantic Coast 1st 4s.....	96	96 1/4	96 1/4
Atlantic Coast Conv. Deben. 4s.....	98	98 1/4	98 1/4
At. Coast (Conn.) 4s, Cfs., 5-20s.....	89 1/2	90 1/2	90 1/2
Atlantic Coast (S. C.) 4s.....	97	97	97
Baltimore & Harrisburg 5s.....	106	106	106
Baltimore & Harrisburg Ext. 5s.....	104	104	104
Carolina Central 4s.....	92 1/2	92 1/2	92 1/2
Charleston & West. Car. 5s.....	105	105 1/2	105 1/2
Coal & Coke Railway 5s.....	90 1/2	90 1/2	90 1/2
Coal & Iron Railway 5s.....	90 1/2	90 1/2	90 1/2
Col. & Green. 1st 6s.....	106	107	107
Georgia & Alabama 5s.....	104	104 1/2	104 1/2
Georgia, Car. & North. 1st 5s.....	104 1/2	104 1/2	104 1/2
Georgia South. & Fla. 1st 5s.....	106 1/2	107 1/2	107 1/2
Macon, Dublin & Savannah 5s.....	97	97	97
Maryland & Pennsylvania 4s.....	95 1/2	97	97
Petersburg Class B 6s.....	110 1/2	110 1/2	110 1/2
Piedmont & Cumberland 1st 5s.....	99	100	100
Potomac Valley 1st 5s.....	105	105	105
Richmond & Danville 5s.....	105 1/4	105 1/4	105 1/4
Seaboard Air Line 4s.....	86 1/2	86 1/2	86 1/2
Seaboard 4s, Stamped.....	86 1/2	87	87
Seaboard Adjustment 5s.....	71	71	71
Seaboard 10-year 5s.....	93 1/2	100	100
Seaboard 3-year 5s.....	98 1/2	100	100
Seaboard & Roanoke 5s.....	106	106	106
South Bound 5s.....	105 1/2	106	106
Southern Railway Con. 5s.....	107	107	107
Suffolk & Carolina 5s.....	103 1/2	103 1/2	103 1/2
Virginia Midland 5th 5s.....	104 1/2	105 1/2	105 1/2
Western Maryland 4s.....	86 1/2	86 1/2	86 1/2
Western N. C. Con. 6s.....	105	105 1/2	105 1/2
West Virginia Central 1st 6s.....	100 1/2	100 1/2	100 1/2
Wilmington & Weldon 5s.....	110	110 1/2	110 1/2

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5s.....	100 1/2	101	101
Anacostia & Potomac 5s, Gtd.....	102	102 1/2	102 1/2
Atlanta Con. St. Ry. 5s.....	104 1/2	105	105
Baltimore & Annapolis S. L. 5s.....	60	80	80
Balto. City Passenger 5s.....	99 1/2	100 1/4	100 1/4
Balto. S. P. & C. 4 1/2s.....	92	92 1/2	92 1/2
Balto. Traction 1st 5s.....	108	108	108
Balto. Trac. (N. B.) 5s.....	109 1/2	111	111
Charleston Con. Elec. 5s.....	92	92	92
Citizens' Ry., L. & P. of N. N. 5s.....	75	75	75
City & Suburban 5s (Balto.).....	105 1/2	106	106
City & Suburban 7s (Wash.).....	101	101	101
Fairmont & Clarksburg Trac. 5s.....	97	97 1/4	97 1/4
Knoxville Trac. 5s.....	102 1/2	102 1/2	102 1/2
Lake Roland Elevated 5s.....	103 1/2	103 1/2	103 1/2
Macon Railway & Light 5s.....	98	98 1/2	98 1/2
Maryland Electric 5s.....	98	98 1/2	98 1/2
Memphis Street Railway 5s.....	90 1/2	98 1/2	98 1/2
Norfolk & Portsmouth Trac. 5s.....	82	82 1/2	82 1/2
Norfolk Railway & Light 5s.....	97 1/2	98 1/2	98 1/2
United Railways 1st 4s.....	85 1/2	85 1/2	85 1/2
United Railways Income 4s.....	62 1/2	63	63
United Railways Funding 5s.....	81 1/2	84 1/2	84 1/2

Miscellaneous Bonds.	Par.	Bid.	Asked.
Alabama Con. Coal & Iron 5s.....	70	70	70
Baltimore Electric 5s, Stp.....	88	89	89
Consolidated Gas 5s.....	107 1/4	107 1/4	107 1/4
Consolidated Gas 4 1/2s.....	92 1/2	94	94
Consolidation Coal Refdg. 4 1/2s.....	82 1/2	84	84
Con. Gas, Elec. Lt. & P. 4 1/2s.....	82 1/2	84	84
Fairmont Coal 1st 5s.....	91 1/2	95	95
G. B. S. Brewing 1st 4s.....	42	42	42
G. B. S. Brewing Inc. 5s.....	5	7 1/4	7 1/4
Mt. Vernon-Woodbury Cot. Duck 5s.....	73 1/4	73 1/2	73 1/2
United Elec. Lt. & P. 4 1/2s.....	90 1/2	91 1/2	91 1/2

## SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending October 17.

Abbeville Cotton Mills (S. C.).....	Bid.	Asked.
Aiken Mfg. Co. (S. C.).....	90	72 1/2
American Spinning Co. (S. C.).....	160	160
Anderson Cotton Mills (S. C.).....	50	50
Arendia Mills (S. C.).....	100	100
Arkwright Cotton Mills (S. C.).....	100	103
Augusta Factory (Ga.).....	60	65
Avondale Mills (S. C.).....	116	116
Belton Mills (S. C.).....	140	140
Brandon Mills (S. C.).....	90	90
Broxon Mills (S. C.).....	90	90
Cannon Mfg. Co. (N. C.).....	135	135
Cabarrus Cotton Mills (N. C.).....	130	135
Chadwick Mfg. Co. (N. C.) Pfd.....	100	100
Chickamauga Mfg. Co. (S. C.).....	190	190
Clifton Mfg. Co. (S. C.).....	105	105
Clinton Cotton Mills (S. C.).....	120	130
Columbus Mfg. Co. (Ga.).....	93	98
Courtenay Mfg. Co. (S. C.).....	100	100
Dallas Mfg. Co. (Ala.).....	90	90
Darlington Mfg. Co. (S. C.).....	78	82
D. E. Converse Co. (S. C.).....	100	100
Drayton Mills (S. C.).....	95	105
Eagle & Phenix Mills (Ga.).....	117	117
Easley Cotton Mills (S. C.).....	175	185
Enoree Mfg. Co. (S. C.).....	57	60
Enoree Mfg. Co. (S. C.) Pfd.....	90	100
Enterprise Mfg. Co. (Ga.).....	80	85
Exposition Cotton Mills (Ga.).....	200	200
Gaffney Mfg. Co. (S. C.).....	70	70
Gainesville Cotton Mills (Ga.).....	70	70
Granby Cot. Mills (S. C.) 1st Pfd.....	35	45
Graniteville Mfg. Co. (S. C.).....	155	165
Greenwood Cotton Mills (S. C.).....	57	60
Grendel Mills (S. C.).....	104	110
Hartsville Cotton Mill (S. C.).....	175	175
Henrietta Mills (N. C.).....	160	175
Irman Mills (S. C.).....	104	108
King Mfg. Co., J. P. (Ga.).....	90	93
Lancaster Cotton Mills (S. C.).....	130	130
Lancaster Cot. Mills (S. C.) Pfd.....	97	100
Langley Mfg. Co. (S. C.).....	120	127
Laurens Mills (S. C.).....	127	135
Limestone Mills (S. C.).....	155	160
Lockhart Mills (S. C.).....	76	76
Lockhart Mills (S. C.) Pfd.....	90	100
Loray Cotton Mills (N. C.) Pfd.....	95	97 1/2
Marble Cotton Mills (S. C.).....	75	85
Mills Mfg. Co. (S. C.).....	106	110
Molokoh Mfg. Co. (S. C.).....	106	110
Monaghan Mills (S. C.).....	109	112
Monarch Cotton Mills (S. C.).....	104	107
Newberry Cotton Mills (S. C.).....	125	130
Ninety-Six Cotton Mills (S. C.).....	140	150
Norris Cotton Mills (S. C.).....	125	130
Olympia Cotton Mills (S. C.).....	90	90
Orf Cotton Mills (S. C.).....	105	105
Pacolet Mfg. Co. (S. C.).....	90	102
Pacolet Mfg. Co. (S. C.) Pfd.....	90	102
Pelzer Mfg. Co. (S. C.).....	169	169
Piedmont Mfg. Co. (S. C.).....	175	177
Poe Mfg. Co., F. W. (S. C.).....	170	180
Saxon Mills (S. C.).....	130	130
Sibley Mfg. Co. (Ga.).....	71	78

Spartan Mills (S. C.).....	135	140
Trion Mfg. Co. (Ga.).....	130	130
Tucapau Mills (S. C.) 1st Pfd.....	200	200
Union-Buffalo (S. C.) 1st Pfd.....	74	80
Union-Buffalo (S. C.) 2d Pfd.....	25	25
Victor Mfg. Co. (S. C.).....	115	125
Warren Mfg. Co. (S. C.).....	107	107
Warren Mfg. Co. (S. C.) Pfd.....	106	110
Washington Mills (Va.).....	28	28
Washington Mills (Va.) Pfd.....	106	110
Whitney Mfg. Co. (S. C.).....	120	120
Wiscasset Mills (N. C.).....	135	135
Woodruff Cotton Mills (S. C.).....	118	122
Woodside Cotton Mills (S. C.).....	102	105
Watts Mills (S. C.).....	95	100
Williamston Mills (S. C.).....	120	120

Quotations Furnished by Hugh MacRae &amp; Co., Wilmington, N. C., for Week Ending October 17.

	Bid.	Asked
Abbeville Cotton Mills (S. C.).....	70	75
Aiken Mfg. Co. (S. C.).....	.....	90
American Spinning Co. (S. C.).....	160	165
Anderson Cotton Mills (S. C.).....	.....	50
Arkwright Mills (S. C.).....	100	103
Augusta Factory (Ga.).....	60	65
Avondale Mills (Ala.).....	116	125
Belton Mills (S. C.).....	130	140
Bibb Mfg. Co. (S. C.).....	.....	114
Brandon Mills (S. C.).....	.....	109
Cabarrus Cotton Mills (N. C.).....	125	140
Chadwick-Hoskins Mfg. Co. (N. C.).....	100	.....
Chadwick-Hoskins Mfg. Co. (N. C.) Pfd.....	100	102
Chickamauga Mfg. Co. (S. C.).....	170	180
Clifton Mfg. Co. (S. C.).....	.....	106
Clifton Mfg. Co. (S. C.) Pfd.....	101	.....
Clinton Cotton Mills (S. C.).....	120	130
Columbus Cotton Mills (Ga.).....	93	98
Courtenay Mfg. Co. (S. C.).....	90	110
Dallas Mfg. Co. (Ala.).....	.....	110
Darlington Mfg. Co. (S. C.).....	80	85
Drayton Mfg. Co. (Ala.).....	.....	100
Eagle & Phenix Mills (Ga.).....	117	125
Easley Cotton Mills (S. C.).....	.....	170
Enoree Mfg. Co. (S. C.).....	55	65
Enoree Mfg. Co. (S. C.) Pfd.....	95	100
Enterprise Mfg. Co. (Ga.).....	80	85
Exposition Cotton Mills (Ga.).....	195	200
Gaffney Mfg. Co. (S. C.).....	71	74
Gainesville Cotton Mills (Ga.).....	.....	70
Granby Cot. Mills (S. C.) 1st Pfd.....	35	45
Graniteville Mfg. Co. (S. C.).....	160	163
Greenwood Cotton Mills (S. C.).....	53	61
Grendel Mills (S. C.).....	105	110
Henrietta Mills (N. C.).....	160	175
King Mfg. Co. John P. (Ga.).....	.....	90
Lancaster Cotton Mills (S. C.).....	130	.....
Lancaster Cot. Mills (S. C.) Pfd.....	97	100
Langley Mfg. Co. (S. C.).....	117	125
Laurens Cotton Mills (S. C.).....	130	.....
Limestone Mills (S. C.).....	150	170
Lockhart Mills (S. C.).....	85	90
Lockhart Mills (S. C.) Pfd.....	99	100
Loray Mills (N. C.) Pfd.....	95	98
Marlboro Cotton Mills (S. C.).....	.....	70 1/2
Mayo Mills (N. C.).....	165	185
Mills Mfg. Co. (S. C.).....	100	102
Mills Mfg. Co. (S. C.) Pfd.....	.....	109
Monacahton Mills (S. C.).....	100	115
Monarch Cotton Mills (S. C.).....	102	107
Monroeville Cotton Mills (S. C.).....	135	140
Norris Cotton Mills (S. C.).....	127 1/2	130
Olympia Cot. Mills (S. C.) 1st Pfd.....	80	91
Orangeburg Mfg. Co. (S. C.) 1st Pfd.....	80	91
Orr Cotton Mills (S. C.).....	100	105
Pacolet Mfg. Co. (S. C.).....	100	101
Pacolet Mfg. Co. (S. C.) Pfd.....	98	100
Pelzer Mfg. Co. (S. C.).....	150	160
Piedmont Mfg. Co. (S. C.).....	175	177
Poe Mfg. Co. (S. C.).....	170	180
Richland Cot. Mills (S. C.) 1st Pfd.....	.....	45
Raleigh Cotton Mills (N. C.).....	153	160
Rock Hill Mills (S. C.).....	153	160
Saxon Mills (S. C.).....	127	.....
Sibley Mfg. Co. (Ga.).....	71	73
Spartan Mills (S. C.).....	130	140
Springstein Mills (S. C.).....	.....	100
Tenapaw Mills (S. C.).....	250	.....
Trion Mfg. Co. (Ga.).....	.....	127 1/2
Union Buffalo Mills (S. C.) 1st Pfd.....	70	74
Victor Mfg. Co. (S. C.).....	110	130
Warren Mfg. Co. (S. C.).....	107	.....
Warrenton Mills (S. C.) Pfd.....	105	110
Washington Mills (Va.).....	25	.....
Washington Mills (Va.) Pfd.....	106	110
Whitney Mfg. Co. (S. C.).....	120	125
Williamston Mills (S. C.).....	.....	122
Wiscasset Mills (N. C.).....	120	135
Woodruff Cotton Mills (S. C.).....	.....	125
Woodside Cotton Mills (S. C.).....	95 1/2	105
Woodside Cot. Mills (S. C.) Pfd.....	96	100



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 Pursuant to resolution adopted at the Special Meeting of the Stockholders, held on 14th October, 1910, notice is hereby given that copies of the proposed lease of the railway, property and franchises of this Company to The Pennsylvania Railroad Company, submitted and read at said meeting, may be obtained by any Stockholder upon application in person or by letter to the Assistant Treasurer of the Company at the above address.  
 LEWIS NEILSON,  
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Okla., Stillwater.—The Payne County Title & Loan Co. of Stillwater, capital \$3000, is reported incorporated; directors, E. B. Shaw of Meeker, Walter S. Richards, A. R. Cleverdon, Henry Oursely and Perry W. Hayes of Stillwater.

Okla., Sentinel.—The Oklahoma State Bank of Sentinel is reported chartered with \$15,000 capital; directors, C. H. Griffith, E. C. Teape, both of Lone Wolf, and E. F. Dunlap of Hobart.

Okla., Webbers Falls.—The First State Bank of Webbers Falls, capital \$10,000, is reported incorporated by William Gibson, J. E. Hayes and B. D. Poulneau.

S. C., Rock Hill.—Everybody's Building and Loan Association, capital \$10,000 to \$1,000,000, is reported to have been granted a commission; petitioners, J. Edgar Poag, A. C. Izard, John R. Williams, D. B. Johnson, John T. Roddey, T. G. O'Dell, N. B. Williams, R. W. Crawford, T. L. Johnston, R. J. Barron, D. P. Leslie, W. J. Neeley.

S. C., Sumter.—The People's Bank, capital \$50,000, has opened for business in the Masonic Temple Bldg.; president, L. D. Jennings; first vice-president, B. C. Wallace; second vice-president, S. W. Stubbs; cashier, S. M. McLeod; assistant cashier and bookkeeper, Alex. M. Broughton; directors, S. W. Stubbs, John W. Shaw, L. D. Jennings, B. C. Wallace, J. M. Brogdon, P. O. Leak, C. C. Beck, W. T. Brogdon, S. A. Harvin, J. H. Robinson, L. I. Parrott, R. B. Belser, C. P. Osteen, W. A. Brown, F. D. Knight.

S. C., Walterboro.—Official: The First National Bank of Walterboro chartered; capital \$25,000. Business began October 1 with directors thus: J. Drew, A. S. Karesh, L. G. Owens, J. M. Witsell, C. G. Padgett, J. H. Peurifoy, E. E. Jones, W. C. Saunders, S. N. Haws and Jas. E. Peurifoy. C. G. Padgett is cashier.

Tenn., Clarksville.—Official: The Southern Trust Co. incorporated; authorized capital, \$50,000; Wesley Drane, president; C. W. Bailey, cashier; directors, Wesley Drane, C. W. Bailey, John J. Conroy, Frank T. Hodgson and Martin L. Crass. Business is to begin about November 1.

Tenn., Etowah.—Official: The People's Bank chartered; capital \$15,000; incorporators, M. C. King, T. A. Pannell, N. B. Dunn, J. P. Dunn, A. M. Shepard and Charles Wagner. Business is to begin about January 1, 1911.

Tenn., Jackson.—Miss Emma G. Rogers writes that she contemplates establishing a bank in Florida, and not in Jackson, Tenn., as previously stated.

Tenn., Jones Mills.—The Jones Mills Bank, capital \$10,000, is reported chartered by W. T. Holley, A. L. McGehee, S. J. Paschall, T. M. Jones, R. W. Potts, J. E. Paschall, J. H. Douglas and William A. Paschall.

Tenn., Memphis.—Elder, Dickinson & Co., who propose doing a general banking business, are reported to have opened offices in the Byrd Bldg.; officers, Eaton Elder, president; D. H. Crump, vice-president; J. F. Dickinson, cashier; John D. Martin, attorney.

Tex., Como.—The First National Bank of Como, capital \$40,000, organized by R. E. Morris, J. M. Fleming, R. A. Foster, J. L. Rutherford, W. J. Beck and others.

Tex., Flynn.—The Citizens' Bank is reported to have begun business with C. Thompson of Winchell president and M. E. Beeman of Plainview cashier.

Tex., Houston.—Reported that H. N. Tinker will open a private bank at 210 Main St., Houston.

Tex., Livingston.—Official: The Guaranty State Bank incorporated; capital \$25,000; incorporators, H. D. Reynolds, Buck, Tex.; L. F. Gerloch, C. L. Gerloch, Dr. Love, Dr. Bergman, J. W. Leggett, J. L. Muller, J. S. Andress and W. P. Smith, all of Livingston. Business began October 7.

Va., Leesburg.—The Farmers and Merchants' National Bank is reported to have begun business with Dr. T. F. Keen, president; S. J. Johnston and S. E. Rogers, vice-presidents, and A. B. C. Whiteacre, cashier.

Va., Newport News.—The Riverside Investment Co. incorporated. A. L. Powell, president; W. Lee Powell, vice-president; J. E. T. Hunter, secretary and treasurer.

W. Va., Fairmont.—Official: The Fairmont Building and Loan Association incorporated; capital \$50,000; incorporators, J. E. Watson, C. E. Hutchinson, Walton Miller, H. L. Heintzleman, R. L. Cunningham and others. Business is to begin October 22.

W. Va., Williamson.—Official: The Loan & Investment Co. chartered; capital \$10,000; H. G. Williams, president; T. W. Brown, vice-president, and H. A. Goodlan, secretary

and treasurer. Business is to begin immediately.

### NEW SECURITIES.

Ala., Greenville.—Bids will be received by H. D. Lampley, Judge of Probate, until noon October 26 for \$50,000 of 4½ per cent. 30-year Butler county road bonds.

Ala., Montgomery.—An official letter confirms the report that the street improvement bonds have been sold. W. A. Gunter, Jr., is Mayor.

Ark., Helena.—A. G. Edwards & Sons of St. Louis, Mo., are reported to have purchased the \$85,000 of bonds of the Yellow Bank drainage district.

Fla., Miami.—Reported that an issue of \$100,000 of improvement bonds is under consideration.

Ga., Atlanta.—Press dispatches state that bids will probably be opened about November 15 for \$300,000 of water and \$200,000 of school bonds.

Ga., Dalton.—Official: The Robinson Humphrey Company, Atlanta, Ga., purchased the \$125,000 of 5 per cent. school, water and light bonds; denomination \$1000; dated July 1, 1910.

Ga., Dublin.—The election to vote on \$30,000 of light, water and street bonds will, it is reported, be held December 6.

Ga., Griffin.—November 8 an election is to be held in Spalding county to vote on \$80,000

of 5 per cent. Spalding county courthouse bonds; denomination \$1000.

Ga., Hartwell.—Hart county is reported to be considering the question of issuing \$40,000 of road and bridge bonds.

Ga., Marietta.—Reported that a vote is to be taken on \$15,000 of sewer bonds.

Ga., Rome.—Press dispatches state that the election to vote on \$275,000 of 4 per cent. 25 year municipal bonds will be held December 6. J. W. Hancock is Mayor.

Ky., Cadiz.—Reported voted: \$12,000 of school-building bonds.

Ky., Lexington.—Carey & Reed and C. C. Miller & Co., contractors, are reported to have purchased at par \$51,060 of 6 per cent. 1-10-year street improvement bonds.

La., Lake Charles.—Ordinances are reported passed authorizing the sale of \$75,000 of city-hall and \$25,000 of firehouse bonds.

La., Leesville.—Bids will be received October 26 for \$40,000 of 5 per cent. 10-40-year school bonds of Vernon parish, Louisiana. Address W. L. Ford, parish superintendent, Leesville, La.

Md., Upper Marlboro.—The \$8000 of 5 per cent. 30-year Prince George's county school bonds were sold to W. C. Duley of Croome, Md., and Hambleton & Co. of Baltimore at prices ranging from 109¼ to 107.

Miss., Bay St. Louis.—An ordinance is reported introduced in the City Council providing for \$75,000 of electric-light plant, sewerage, drainage and street bonds.

Miss., Belen.—Bids will be received until

noon November 7 by I. C. Denton, Chancery Clerk, for \$40,000 of 5 per cent. 20-30-year Quitman county courthouse and jail bonds.

Miss., Oxford.—Official: The Board of Supervisors of Lafayette county will on November 7 sell \$3000 of bonds of Taylor separate school district. Address W. M. Woodward, chancery clerk.

Miss., Osyka.—Official: John Nuveen & Co. of Chicago have purchased the \$30,000 of 6 per cent. 30-year electric-light and water-works plant bonds; amount, \$30,000; purchaser to furnish bonds; Clinton Thompson is Mayor.

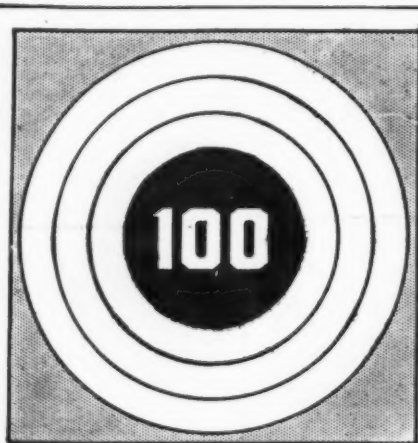
Miss., Sandersville.—Notice is given that the town proposes to issue \$5000 of school-improvement bonds. R. W. Hosey is Mayor and J. R. Herndon Clerk.

Miss., Starkville.—Official: Ulla Sutherland & Co. of Chicago were the successful bidders at 103.29 for the \$14,000 of school and \$2000 of street and sidewalk 6 per cent. 20-year bonds. There were a number of other bids ranging from par to 103. Walter Page is City Clerk.

Miss., Starkville.—Official: Bids will be received until noon November 7 by E. A. Buckner, treasurer, for \$30,000 of 5 per cent. highway bonds of Supervisors District No. 1; denomination \$500; dated October 3, 1910; maturity 1921 to 1930, inclusive, \$3000 each year.

Miss., Tunica.—Reported that Woodin, McNear & Moore of Chicago were awarded at \$317 premium \$50,000 of 5 per cent. 30-year road and bridge bonds.

Miss., Wiggins.—Official: Bonds for street



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improvements defeated. The proposed \$10,000 of bonds to cover expense of building a suitable building for the Harrison County Agricultural High School, provided same is located in Wiggins, will not be issued until it becomes necessary. The school is not located as yet. I. E. Lord is Mayor.

N. C., Charlotte Township.—Reported that an election is to be held November 8 to vote on \$10,000 of road bonds. C. N. Leonard is chairman Board of Brunswick County Commissioners, Southport, N. C.

N. C., East Spencer, P. O. Salisbury, Substation No. 2.—Reported that on November 5 an election is to be held to vote on \$25,000 of water and light bonds. A previous election has been declared void.

N. C., Elizabeth City.—All bids received for street-paving bonds rejected.

N. C., Hickory.—J. A. Marley, chairman of Board of Trustees, will receive bids until noon October 24 for \$30,000 of 6 per cent. bonds.

N. C., Newbern.—The Western German Bank, Cincinnati, O., is reported to have been awarded at 101.622 and accrued interest the \$50,000 of 5 per cent. 30-year street-paving bonds.

Okla., Checotah.—Official: Bids will be received by Ben Huddleston, City Clerk, until 8 P. M. November 1 for \$4000 of 6 per cent. 35-year sewer bonds.

Okla., Hastings.—Official: J. A. Marley, Mayor, will receive bids until October 24 for \$20,000 of 6 per cent. 30-year water-works bonds. Denomination \$100.

Okla., Oklahoma City.—An election will probably be held November 8 to vote on \$50,000 of water bonds.

Okla., Wakita.—Reported that it is proposed to issue \$20,000 of school district building bonds.

Tenn., Jackson.—Reported voted: \$75,000 of bonds for building new railroad from Jackson to Dyersburg.

Tenn., Memphis.—E. H. Rollins & Sons, Chicago; Blodgett & Co., Boston; Merchants' Loan & Trust Co., Chicago, and A. G. Edwards & Sons, St. Louis are reported to have purchased the \$1,010,000 of street bonds as follows: \$435,000 of 6 per cent. 3-year average at \$10,440 premium; \$300,000 of 4½ per cent. 35-year at \$3850 premium, and \$275,000 of 4½ per cent. 35-year at \$3575 premium.

Tenn., Trenton.—A local investor is reported to have purchased at par \$12,000 of 6 per cent. 5-30-year electric-light-plant bonds.

Tex., Austin.—The Attorney-General has approved the following securities: District 2, \$25,000; district 3, \$225,000; district 4, \$70,000; district 5, \$85,000; district 6, \$105,000; district 7, \$45,000 of 5 per cent. 10-40-year Ellis county road-improvement bonds; \$650,000 of 4 and 4½ per cent. 40-year Dallas school, sewer, water-works and street bonds; \$1700 of 5 per cent. 10-30-year Robertson county school bonds; \$1000 of 5 per cent. 5-30-year Coleman county school bonds; \$800 of Upshur county 5 per cent. 5-10-year school district bonds.

Tex., Beaumont.—Official: Bids will be opened November 1 by W. S. Davidson, chairman Canal Commission, for \$488,000 of 5 per cent. 10-40-year bonds for purpose of deepening water to a depth of 25 feet from Port Arthur through the Sabine-Neches Canal and Neches River to Beaumont; denomination \$1000; dated November 1, 1909.

Tex., Bellville.—Reported voted: \$25,000 of Precinct 1, Austin county, road bonds.

Tex., Colorado.—Reported voted: Independent school district bonds.

Tex., Dallas.—An official letter confirms the report that bids will be received until noon October 26 for \$100,000 of 4 per cent. water-works, \$100,000 sanitary sewer and \$100,000 public school improvement 4 per cent. bonds; also for \$350,000 of 4½ per cent. permanent street improvement bonds. Address J. B. Winslett, City Secretary.

Tex., Denison.—Reported voted: \$50,000 of water-works bonds.

Tex., El Campo.—November 10 an election is to be held to vote on \$350,000 of drainage bonds.

Tex., Plainview.—Official: Negotiations are under way with the Noel-Young Bond Co. of St. Louis, Mo., for the sale of \$10,000 of 5 per cent. 20-40-year city hall and fire station bonds. Jas. R. De Lay is Mayor.

Tex., Floresville.—The question of holding an election to vote on \$18,000 of school bonds is reported under consideration.

Tex., Garland.—Reported voted: \$15,000 of school-building bonds.

Tex., Haskell.—November 8 an election is to be held to vote on \$100,000 of 5 per cent. 20-year Haskell county road bonds.

Tex., Houston.—Reported that an election

is to be held in Harris county in December to vote on \$1,250,000 of channel bonds.

Tex., Shiner.—Official: September 15 city voted \$8000 of 5 per cent. 5-20-year water-works extension bonds; denomination \$500; dated November 1, 1910. Address Louis Trautwein, Mayor.

Tex., Lufkin.—Reported voted: \$18,000 of water-works bonds.

Tex., Rising Star.—Reported voted: \$10,000 of street-improvement bonds.

Tex., Snyder.—Official: City is offering \$44,000 of 5 per cent. 15-40-year water-works and sewerage bonds. Address Mac Taylor, Mayor.

Tex., Stamford.—Official: Bids will be received until October 25 by W. C. Blanchett, Mayor, for \$10,000 of 5 per cent. 10-40-year street-improvement bonds; denomination \$1000; dated October 1, 1910.

Tex., Terrell.—Reported that an election is to be held November 10 to vote on \$3000 of sewerage and other improvement bonds.

Tex., Victoria.—Reported that an election will probably soon be held to vote on from \$300,000 to \$500,000 of Victoria county road-building bonds.

Tex., Waxahachie.—Official: Bids will be received by J. T. Spencer, County Judge, until 2 P. M. December 1 for \$582,500 of 5 per cent. 20-30-year Ellis county road district bonds. C. T. Spalding is County Auditor.

Va., Amherst.—Amherst county will, it is reported, vote in January on \$135,000 of road bonds.

Va., Front Royal.—Official: The election to vote on \$30,000 of 5 per cent. Warren county road bonds will be held November 8; denomination \$500.

Va., Jonesville.—Reported that on November 29 Lee county will vote on \$350,000 of road bonds.

Va., Norfolk.—Official: An official letter says that all of the \$858,000 of 4½ per cent. 30-year bonds issued to meet various appropriations have been sold. Of the issue \$706,000 was purchased at 96.08 by N. W. Harris & Co. McD. L. Wrenn is chairman finance committee.

Va., Portsmouth.—J. Davis Reed, Mayor, writes that vote will not be taken on the \$600,000 of water-works bonds for 60 days.

Va., Roanoke.—Reported that the \$500,000 of bonds have been sold, as follows: Francis Bros. & Co. of St. Louis, Mo., \$75,000 at par; Sinking Fund Commissioners, \$15,000; N. W. Harris & Co. of New York, \$410,000.

Va., Wise.—November 28 an election is to be held in Wise county to vote on \$700,000 of road bonds.

Va., Warrenton.—City is reported to have sold \$15,000 of 5 per cent. 10-30-year water bonds.

At Checotah, Okla., bids will be received until 8 P. M. November 1 for \$40,000 of 6 per cent. 25-year sewer bonds. Further particulars will be found in the advertising columns.

Snyder, Tex., is offering \$44,000 of 5 per cent. 15-40-year water-works and sewerage bonds. Further particulars will be found in the advertising columns.

Taylor separate school district, Lafayette county, Mississippi, will on November 7 sell \$3000 of bonds. Further particulars will be found in the advertising columns.

#### FINANCIAL NOTES.

The First National Bank of Birmingham, Ala., is reported to have increased its capital from \$1,000,000 to \$1,500,000.

The Avozelles Bank at Marksville, La., has, it is reported, decided to increase its capital from \$30,000 to \$75,000.

Renfro Jackson is reported to have been appointed agency manager of the Interstate Casualty Co. of Birmingham, Ala.

The conversion of the State Bank of Siloam Springs, Ark., into the First National Bank of Siloam Springs has been approved.

The First National Bank and the Bank of Leesville, La., according to press dispatches, are to be merged, the consolidation to become effective about December 1.

An official letter says that the First National Bank of Waynesville, at Waynesville, N. C., and the Commercial Bank of that place have been merged.

The conversion of the Brooksville Banking Co. into the First National Bank of Brooksville, Fla., has been approved and the capital increased from \$15,000 to \$25,000. J. B. Norman is president.

The Northern Central Railway Co. announces that copies of the proposed lease of its line and other property and franchises to the Pennsylvania Railroad Co. may be

obtained by any stockholder upon application to the assistant treasurer at the offices, Calvert and Centre Sts., Baltimore.

A condensed statement of the 254 State banks in Virginia at close of business September 1, 1910, shows loans and discounts, \$50,018,196; capital stock paid in, \$11,775,264; surplus fund, \$4,900,126; undivided profits, less interest, taxes and expenses, \$1,978,430; total deposits, \$47,163,388; total resources, \$68,154,980.

A condensed statement of 271 State banks and branches and 5 private banks doing business in South Carolina at close of business September 22, 1910, shows loans and discounts, \$50,453,492; capital stock paid in, \$10,124,286; surplus fund, \$3,164,400; undivided profits, less current expenses and taxes paid, \$2,337,254; individual deposits subject to check, \$17,466,831; savings deposits, \$15,383,656; demand and time certificates of deposit, \$3,444,130; total resources, \$64,491,536.



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